The Builder.

Vol. XLIII. No. 2079.

Saturday, December 9, 1882.

ILLUSTRATIONS.

The Crown of the Steeple, St. Mary-le-Bow, Cheapside.—Sir Christopher Wren, Architect 748
House at Bishop Down, Tunbridge Wells (Double-page Engraving).—Mr. James Neale, F.S.A., Architect 750
The Great Hall of the Royal Courts of Justice (Double-page Engraving).—The late Mr. G. E. Street, R.A., Architect 752, 753
Dr. White's Almshouses, Bristol 757

CONTENTS.

German Exploration in Greece 737
The Grosvenor Gallery 738
Of Portraits and Inscriptions Appertaining 739
The Decoration of St. Paul's Cathedral: Royal Institute of British Architects 740
Provision of Buildings for Science and Art in Germany 742
Flood Prevention Works at Nine Elms and Battersea 742
"On Sundry Working Drawings" 743
The Pantheon 744
Mr. Ruskin on Cistercian Architecture 745
The Victor Emmanuel Monument, Rome 746
The New Law Courts: The Great Hall 746
Church of St. Mary-le-Bow 759
House at Bishop Down, Tunbridge Wells 759
Dr. White's Almshouses, Bristol 759
Development of Science and Art by the Extension of the Eisteddfod 759
How our Public Improvements are Carried Out 760
The Burning of the Alhambra Theatre 761
A Want at Netley Hospital 762
Modern Sanitary Legislation 762
Art Exhibition Building, Rome 762
The Rathhaus at Vienna 763
Machinery at the Smithfield Club Show 763
Election of a District Surveyor 763
The Use of Cement in the Construction of Sewers 763
Building Patent Record 763
Hard Glass 764
St. Peter's Church, Leicester 764
Provincial News 764
Education of Engineers 764
Damp Walls 764
Removal of Snow 764
Costs of Paving Thoroughfares 764
Obituary 765
Dissenting Church-Building News 765
Stained Glass 765
School-Building News 765
Miscellanea 765

German Exploration in Greece.

VALUABLE as have been the results of the German explorations at Olympia, they are cast into the shade by the discoveries made by the same industrious archæologists at Pergamos. And while the Berlin Museum is enriched only by casts of the Olympian marbles, it possesses, in the actual objects recovered at Pergamos, a treasure second only to the marbles of the Parthenon.

Buried in the sand, on the top of a hill covered with dwellings, the remains of the temple of Jupiter at Pergamos have been found in a high state of preservation. Some of the plaques have been discovered as perfect as if they had been wrought only yesterday. The indications recovered have been enough to justify a complete ideal restoration of the temple. Portions have been found of all the essential elements of the building; columns, capitals, cornices, entablatures, with indications of the exact dimensions of these main features, and of the position which they occupied in the building. Thus the idea has been happily carried out of making the museum for the exhibition of the Pergamos marbles a reproduction of the temple for which they were sculptured.

The plan of the Temple of Jupiter at Pergamos, according to the German explorers, differs from that of any ancient temple hitherto known. The architect has been the minister to the sculptor. Instead of having to display his figures in lofty pediments, at a distance from the eyes requiring some allowance for foreshortening, the sculptor has here produced a long internal frieze, which was brought under close observation by means of a sort of gallery, reached by a central staircase. This rose behind a central altar, situated in the centre of the uncovered area within the four walls of the edifice. The frieze is only interrupted by the staircase. Being only about 8 ft. above the foot of the spectator, it is thus admirably exposed to view. Small Ionic columns rest on the basement adorned by the frieze, and support the cornice. Metopes were also interposed, at a fair height, and well in view. These sculptures represent scenes in the legend of the Pelepidæ. They have unquestionable merit; but they attract but little attention when compared with the noble reliefs of the frieze. This dominant feature of the temple consists of blocks of marble of a bluish-grey colour, 2·30 mètres high, of unequal widths, and about 1½ mètre thick, held together by tenons. The blocks were inserted rough on the face, and sculptured in position in the temple.

The entire length of the frieze is about 100 mètres. The subject is the conflict between the gods and the giants. Jupiter, Minerva, Diana, Apollo, Amphitrite, and Cybele, are assaulted with the utmost fury by terrific forms, in the production of which the imagination of the sculptor has been subdued by exquisite taste. Thus the fins of the sea-horses conceal the line of junction between the body of the horse, and the scaly tail of the monster. It was one of these exquisite creations of fancy of which the beauty, when the specimen was sent to Berlin, was at once acknowledged to be so great as to decide the Government to provide funds for the continuance of the excavation. Among the giants there are great varieties of genus. Some have the human form; with faces full of youth and grace, they appear as terrestrial gods. Others are furnished with vast wings; the limbs of others terminate in the coiling tails of serpents. Others are yet more entirely composed of the elements of the lower animal life, with the neck and shoulders of the bull, or the mouth and claws of the lion. On these savage enemies Diana looses her enormous hounds. Rocks and stones are hurled by the combatants, and at the very end of the frieze an enormous serpent has just seized in his jaws the claws of the eagle of Jupiter.

The violence and force of the Titans contrasted powerfully with the calm and serenity of the gods. Severe in graceful beauty, they seem to disdain the utmost fury of their enemies. A female figure on horseback, probably Silene, who half turns to the spectator the upper part of her figure, is an example of exquisite grace. A yet bolder result of the imagination of the artist is displayed in the pause, and mutual regard, of a goddess of mature and perfect beauty, and a giant of human form as young and beautiful as herself. The ancient legend, of which we have no indistinct traces in the Pentateuch, has been represented on the frieze of Pergamos, with a force and beauty difficult to characterise in adequate language. Whether we consider the grace of the nude form, —the flowing outlines of the drapery,—or the contrast between the serener calm of the faces of the gods and the hatred, rage, fear, pain, and other passions so vividly expressed of the features of the Titans,—the whole composition presents the finest specimens yet discovered of Grecian art, with the sole exception of the marbles of the Parthenon.

As yet, it is much to be regretted, the names of the sculptors of these beautiful figures are unknown. But on two fragments the word εποιησε has been found; and it is hoped that the names which must have preceded this word may yet be discovered. A most important result of these discoveries is the light that they throw on the special characteristics of the school of Pergamos. While presenting close analogies with the work of Phidias, the figures on the frieze of the temple of Pergamos offer also marked differences. They, moreover, recall the treatment of several well-known *chefs-d'œuvre* of ancient art; such as the figure of Victory with the Bull, on the balustrade of the Temple of Wingless Victory, at Athens, and the Victory of Samothrace, now in the Louvre. The head of a young girl in white marble, also found at Pergamos, and shown at Berlin, recalls the very type of the Venus of Milo.

Another group of ancient sculpture, generally referred to the school of Scopas, is recalled by the figures on the frieze of the Temple of Jupiter. Such are the dying warriors of Venice and of Naples, the gladiator of the Capitoline Museum, and the well-known group of the Laocoon. Of this last group, the central figure is an exact reproduction of a young giant stretched at the feet of Minerva, in the frieze. The attitude, the details of the torso, the thighs, and the coils of the serpent around, are absolutely identical. The only difference is in the right arm. But that in the Laocoon is a modern restoration, by Giovanni Montorsoli. In the figure in the frieze the arm is at once more expressive, and more in conformity to the general movement of the figure. It is bent back on itself, and brought close to the head, as if in a movement of agony. In another figure, that of a young man, who, in the anguish of death, grasps the arm of a goddess, we have one of the most touching inspirations of ancient art. The rank and wealth of what may, perhaps, best be called the Greek schools of Asia Minor, are brought into full relief by these wonderful sculptures. After the time of Alexander, relations were more close than before between Greece herself and her Asiatic daughters. The most famous sculptors of Greece, — Polycletus, Scopas, Praxiteles, — worked for the colonial cities. An uninterrupted succession of noble monuments bordered the coast. The tombs of Xanthus, at the point of Lycia; that of Mausolus, with its colossal statues, at Halicarnassus; the temples of Diana, at Ephesus; of Athene Paliades, at Priene; of Jupiter, at Pergamos; and many others, were sanctuaries of which the artistic wealth is attested by the voice of antiquity. Scopas was a native of Paros; Apollonius, of Rhodes; as were the painters, Apelles and Parrhasius; Agasias, the sculptor of "The Wrestler," was of Ephesus; and the name of Agesandros is inscribed on a pedestal found near the statue of the Venus of Milo.

A New Altar and Reredos which have just been erected in the Church of the Holy Cross, Liverpool, are stated to have few, if any, rivals in Great Britain. The group on the sinister side represents the finding of the Holy Cross by St. Helen, and the miracle by which the true cross was distinguished from those of the two thieves. This panel is 7 ft. in height and 9 ft. broad. On the dexter side, "The Descent from the Cross" forms the subject. The work was designed by Messrs. Pugin & Pugin, and has been carried out under their personal superintendence by Messrs. R. L. Boulton & Sons, sculptors, Cheltenham.

THE GROSVENOR GALLERY.

Continuing the principle which was inaugurated recently, of rendering the winter exhibitions at the Grosvenor Gallery the opportunity for giving representative collections of the works of eminent modern artists, the conductors of the Gallery have this week opened to the public a collection of the works of two painters only,—Mr. Alma Tadema and the late Mr. Cecil Lawson. This tribute to the latter artist, which would hardly have been paid to him just yet as a living artist, comes very appropriately as a memorial to an undoubtedly gifted painter cut off prematurely at almost the outset of his career, to the great regret of many both among personal friends and among those who knew him only through his works; and the exhibition-room in which he made his first decided public success, by his large landscape, entitled "The Minister's Garden," is the most appropriate place in which to bring together the collected results of the labour of his short but energetic life.

Taking the works of the deceased painter first, it may be observed that while they show a surprising amount of important work on a large scale, considering the brief duration of their painter's career, it is somewhat difficult to arrive at a definite conclusion as to their precise value among modern landscape paintings, or as to the ideal, if any, which the artist had proposed to himself to follow. There are, in fact, two or three styles among this collection of landscapes, and these so much at variance with each other in regard to feeling and method, that it is difficult to understand how the same painter could have been thoroughly in earnest in all of them; and the conclusion must be that he was trying experiments, and had not fairly "come to his colours" in regard to landscape art. The "Minister's Garden" is a rather hardly painted landscape, with a much-elaborated foreground and a fine linear perspective of distance, but very deficient (as we believe we said when it was first exhibited) in aërial perspective. It belongs, on the whole, to the realistic school of landscape-painting. Shortly after this,—we are not sure if it was not in the same year,—came "In the Valleys,—a Pastoral," No. 172 in the present exhibition, in which there is a quite different method employed; even the foreground is under a misty veil of half light, and the distances are treated with much more attention to the aërial perspective of successive zones of distance, in a manner recalling some of the earlier work of Turner, of which some other paintings in the gallery (such as "Wharfdale," 143) also remind us. The painting called "The Morning after the Storm" (159), which is hardly like any effect of nature, appears to be an emulation, on the other hand, of the spirit of Turner's latest, and in a certain sense, most ideal work; while "The Cloud, Barden Moors" (163), suggests a double reminiscence, that of Crome in the composition, that of Constable in the manner of execution. This last is a fine powerful thing unquestionably, although we cannot but be conscious that the effect of sunlight on the masses of cloud is enhanced by the falsity of making the landscape itself, "the ground," in fact, a great deal darker and duller than it could be under an atmosphere which threw such a mass of light on the clouds; but if we put this alongside "The Morning after the Storm," it is impossible to think that the painter of these had any fixed idea about the object of landscape art or the method of interpreting nature. The collection impresses us as being, to a great extent, a series of reminiscences or more or less conscious imitations of the style and feeling of landscape-painters of former periods. This applies less, perhaps, to the largest work, "The Minister's Garden," than to any of the others; and among the smaller paintings there are a good many of much beauty and interest. But as a whole the collection impresses us with the idea that the late artist was a gifted but also a very ambitious painter, who was anxious rather too quickly to achieve a great style in landscape-painting, and in pursuit of this aim worked rather at random on hints from existing styles, instead of endeavouring to elaborate a style of his own based directly on the study of nature. For this reason we doubt whether his works can have that degree of permanent value which some seem to anticipate for them, although they represent a good deal of effective and powerful work, and we may very well believe that had the painter lived, he would in time have evolved out of the sum of these various efforts a distinct and original style of his own.

The collection in one room of most of the principal works of Mr. Tadema, while it brings out forcibly the splendid and constantly advancing technical power of his art, certainly at the same time illustrates its intellectual shortcomings. When we see only one of these beautifully-executed pieces of realism of antique life, we are delighted with the real picture presented to us of the facts and surroundings of that life, and the splendid execution of detail. But when we see a number of these works together, we cannot help feeling strongly their deficiency in higher human interest, or, we might almost say, in any human interest whateuer. Of beauty, there is little in the figures, and where there is, it is beauty of mere material kind: hardly even the beauty of fine features, only that of surface and flesh tints. There must have been something more in ancient Roman life than mere *dolce far niente*,—mere bathing, drinking, and dancing; but Mr. Tadema's personages know no higher life than this; they seem to have no expression and character; they are outer masks of human life in which there is no informing spirit. The nearest approach to something like human interest and characteristic expression is in what in other respects we incline to regard as almost the artist's finest work, the "Sculpture Gallery." Here there is not only the artist's splendid power of painting details of sculpture and architecture shown to perfection, but there is also in the group of people collected in the gallery a degree of differentiation of personal character which makes us feel for once as if we really were behind the scenes of Roman society. The master of the house, quiet and dignified, the lady who sits by him and seems to look at the sculpture with a connoisseur's appreciation, and the other lady, who is chiefly thinking of her children, and how they are enjoying the show,—these stand out with a distinctness of character which we find in few other of the artist's figures. Mostly, they are so many figures clad in Roman costume, and that is all. The "Sculpture Gallery" also is a fine example of the beautifully clear light which Mr. Tadema throws over his scenes. One of his favourite effects, and one which is always charming, is that of displaying through a window opening or an archway some little bit of architecture in the middle distance sparkling under intense sunlight. This is beautifully seen in the two small paintings of nearly similar motive, "There he is" (65), and "A Love Missile" (96), in each of which a woman looks out from a window (in the latter case the figure seems to look through a metope opening, the sculptured slab of which has been turned on its centre); the interior is cool and grey, and through the opening is seen a bit of Classic building glowing in warm sunlight, and every detail showing through the clear atmosphere. This clear light strikes us again with special beauty in the scene called "Hide and Seek" (120), and in "En Repos" (73). The latter is an open-air scene, in which a figure sits on a terrace overlooking the sea, the high coast stretches away to the left, and one or two white temples glisten on the height in the distance. No painter has ever gone so far in realising this aspect of Classic architecture in the days when it was to be seen in its pristine freshness, and not, as now, merely beautiful in decay; his paintings beguile us for the moment into thinking that we have really been in the land of ancient columnar architecture when it was a living art, and that it is within reach for another visit.

The dates of all the pictures exhibited, or nearly all, are given in the catalogue; it seems a pity that they were not arranged in regular chronological succession an the walls; the less symmetrical arrangement which would have been necessary would have been more than compensated for by the advantage of being able to follow consecutively the history of the development of the special qualities which now distinguish Mr. Tadema's painting. There are one or two works painted as long as twenty years ago, which belong to a very different type of subject from that which we now associate with the painter's name, such as "A Bargain" (3), dated 1860. Here we see, however, that fondness for architectural detail and surface, which increasingly distinguishes Mr. Tadema's subsequent work, in the care which is bestowed on the treatment of the brick wall which forms the principal background to the figures. Of Mr. Tadema's treatment of Roman and, occasionally of Greek, architecture in his maturer style too much cannot be said; the study of his works is really one of the best of lessons in the characteristics of Roman architecture, and in correctness and effectiveness of representation of architectural detail he is beyond any other painter of the day. Among the architectural portion of his painting at the Grosvenor is an almost solitary example of a study of Gothic detail from Munster Cathedral (41), not treated, however, so forcibly or with such evident interest as is shown in the Classic architectural subjects.

Among the paintings, very few in number, in which the aim seems to have been to tell a story or raise an emotion beyond that produced by mere power of execution, the most remarkable is that of the Roman soldiers discovering Claudius, the last member of the household of Caligula whom they had left unslaughtered, and whom they dragged out, in a sudden turn of policy, to be made emperor whether he would or no. The peculiar situation, in which the man who has been hiding imagines the worst, and that he is at last discovered only to be dragged out and put to instant death, and is met at the same time by the half-grotesque adulation of the soldiers, is so admirably suited for illustration in painting that it would be surprising if so brilliant an executant as Mr. Tadema should not have made an effective picture even by the most realistic treatment; and this picture is really effective and at the same time natural. The grouping arises out of the probabilities of the situation. The majority of the soldier's party remain at the conventional distance in an attitude of homage to the man they have just at that moment concluded to call emperor, but it is necessary that he should be apprised of the fact, and one soldier of the party therefore goes up and drags aside the curtain which conceals him, and we have the almost grotesque contrast of this soldier bending the knees and bowing before a frightened wretch who is nearly beside himself with apprehension. That is the intention of the picture, though the expression on the countenance of Claudius does not quite explain itself; in this and other respects the smaller and more roughly executed edition of the picture (92) which seems to have been the first study for it, has more life, truth, and animation than the finished picture. But it is much to be wished that Mr. Tadema had turned his attention more often to illustrating definite scenes, historic or imaginary, and well-marked characters and actions, instead of confining himself so much to the mere portrayal of figures of Roman physique and costume, but with no story to interest us and no definite or marked character to distinguish one from another. Had he made more attempts of this kind, the interest of the present collection would have been greater even than it is. "The Widow," and "The Death of the First-born" (37, 49) come nearest to human interest of the same kind; but even in them we feel that, though the subjects are ostensibly of a very pathetic nature, the painter has been thinking mainly of his Egyptian architectural details and *bric-à-brac*, and the feeling of the situation is very secondary with him. Perhaps the best subject-picture next to Claudius is the "Fredegonda" (98), which hangs at the top of the room, and which, like the Claudius, many will remember in the Royal Academy exhibition. There is here really some pathos in the figure of the deserted queen watching the nuptials of her rival, from which the elaborate detail is not able entirely to distract us. In other cases titles are given to pictures which imply a subject, such as "A hearty Welcome" (82), in which a girl is embraced by the mistress of the garden; but the incident is completely secondary, the picture consists in the brightly-painted garden-scene with its half red and half white columns among the maze of plants, and the sunlight which sparkles over the whole. This, of course, is in itself an object quite worth painting, if Mr. Tadema were to be regarded as a painter of architecture and landscape merely; what we regret is that an artist with such power of drawing and painting the figure should put this power to so little use in regard to the portrayal of human sentiment and action.

In regard to the artist's figure-painting *par excellence*, there seems to be a constant advance in power in this class of work up to almost the present moment. If we take the three principal nude subjects in the collection, which belong all to a recent period, we cannot but see this. "After the Dance" (105), in which a young Bacchante has thrown herself down in (it is to be feared) a tipsy slumber, is dated 1875, and attracted much attention in the Academy at the time. This is a remarkable and charming work, and could not be surpassed in drawing; but if we go from this to the "Sculptor's Model," painted two years later, there is a nearer approach to the real texture of the living body in this, and some portions of this figure, notably the feet, are among the most beautiful bits of painting that have ever been seen in ancient or modern work. The small picture called "The Tepidarium" (118), painted last year, is hardly to be compared with "The Sculptor's Model," as the latter is full size, and "The Tepidarium" is a figure which would only stand about 1 ft. high; but in this little work, which represents a young woman reclining in the luxurious languor induced by the warm bath and the warm chamber, the delineation of the body, both in form and colour, seems quite perfect; we can almost see her movement in breathing. We again feel it a pity that such beautiful work and such power over technique should not be employed as a means to higher aims, rather than merely as an end in themselves; but the beauty of the work is undeniable. The whole collection impresses one with a sense of having been studying paintings in which the power of representing what the painter wishes to represent is more completely within his call than, perhaps, is the case of any other artist of the day; but one is obliged to set off against this the admission that the aim is not on the whole a very high one; at all events, not the highest, and that it is possible to tire of even the most brilliant execution when it is accompanied by no attempt at emotional expression, and makes no appeal to the intellect, in the higher sense at least. What these pictures really have, beyond their remarkable execution, is the interest arising from the archæological knowledge displayed in them, and the feeling they give us that we have really seen something, through them, of at least the external aspects of a society long since passed away; to which may be added the admirable delineation and revivifying of Classic architecture, which we especially should be ungrateful to forget to recognise.

OF PORTRAITS AND INSCRIPTIONS APPERTAINING.

The establishment, and still more the apparent, though it may be only the quietly-growing, popularity of the National Portrait Gallery, bear present witness to the interest which has so many other attestations, attaching to the recognition of the features of distinguished men and women, even the merely notorious as well as the admirable; curiosity will take no denial, however authoritatively assured that its satisfaction will be but futile. "There is no art," says Duncan, "to tell the mind's construction from the face"; such is his conclusion from the betrayal of his absolute confidence by the Thane of Cawdor, and his words are scarcely pronounced when they are practically illustrated, as he embraces the still more deadly traitor, Macbeth, the late warning notwithstanding, with confidence no less absolute, as his "worthiest cousin." The difficulty, indeed, is further enhanced when we have to make allowance in our interpretation of character from what at best may be a mask, for an entirely foreign intrusion of characteristics due to the style and the limitations of a sculptor or a painter. So far as a painter,—a Lely or a Vandyck,—may be in harmony with the prevalent tone of the society which furnishes his subjects for portraiture, this difficulty is minimised. But even in such cases, it is by no means unimportant; to reduce it to insignificance as nearly as may be, it is necessary to make ourselves at home among the subjects, and very familiar indeed with numerous works of a particular painter; then his own speciality will come by degrees to be insensibly allowed for as a common difference, and will cease to overlay so oppressively the variable distinctions of his several models. We may then recognise even the bold broad lines of the nature of Oliver Cromwell, despite the dressy finishing and furbishing of a mannerist. The sophistication, therefore, of the mannerisms of the artist have to be discharged and got rid of, like the equally-confusing sophistications of the fashions of a period. The extravagances of fashion,—of obsolete fashion,—at first render all portraits uniform; and there is really some excuse for interchanging one bewigged celebrity for another, be their personalities as contrasted as Addison and Walpole. The confusion vanishes upon familiarity, even as we learn, with prolonged intercourse, to get over our mistakes between twins, and wonder at last how any mistake was ever possible. Plato surely must have seen little of Egyptian statues, or paid little attention to them, or he never could have written down that they all conformed mechanically to a fixed hieratic model. A still more serious, if it does not prove too often a fatal difficulty in the way of obtaining a true impression of the original of a portrait, is due to utter incompetence of a painter. We may discount Vandyck; but as "true no-meaning puzzles more than wit," and the flourishes of a caligraphist are tolerable as compared with torn copy, there is little indeed to be done with professed portraiture that finds it easier to leave out expressive forms or to substitute nonentity, than to err by exaggeration, which at least owes a departure to the original. The engraved portrait of Shakspeare prefixed to the first folio, is but a sorry production; and if, indeed, as Ben Jonson's verses assure us,—therein "the painter had a strife with Nature to outdo the life,"—the painter had very much the worst of it, as has happened before and since. And yet when it is carefully collated with the Stratford bust, and further assisted by familiarity with a certain type of face and general build very prevalent in Warwickshire, we may be satisfied with our recovery of the genial presence of the "handsome well-shaped man," and flatter ourselves, if we please, that we can recognise in it the infallible expression of one who, by the testimony of surly Jonson himself, "was indeed honest, and of a free and open disposition." But what shall we say of the "Chandos portrait," which is installed in the place of honour at the National Portrait Gallery? Those who claim to be experts accept it,—"give it title, knee, and approbation." They even are ready to attest that its genealogy from one possessor to another is irreproachable, and albeit there are cavillers who shake the head at the ring of some links of the chain of pedigree under tap of the critical hammer, it seems that authority will not be gainsaid. But what, then, is to be said for the painter? His production is absolutely at variance with every characteristic both of form and expression, in which the bust and the engraving confirm each other, while harmonising with the authentic accounts of the nature of the man. We must be content to take warning how little faith is challengeable for the resemblance of a single portrait, at any rate, of the sixteenth century, when it is put before us, without the confirmation of a certain degree of correspondence with other representations of the original.

How many uncertainties of identification would have been, and would be saved, were the custom but universal of attaching a name to the canvas or the marble, out of sight, at least, if we are to admit and make allowance for a certain inscrutable repugnance to a frank exhibition of it. Some such aversion there certainly seems to be, and to have been as prevalent in ancient as in modern times. It is with a sense of irritation and injury that we regard the numerous fine but unidentified portrait busts that have come down to us uninjured from antiquity. It is scarcely less tantalising than to come, as we do, upon fragments of busts inscribed with historic names, but wanting the heads. A chorus of congratulation and delight has recently greeted the identification of a beautiful uninscribed bust of Thucydides at Holkham,—perfectly certified, thanks to a bad but inscribed repetition at Naples; another has been pretty generally accepted, but, at best, it is only with trembling hope, as that of Æschylus. All over the kingdom, ancient homes contain portraits which declare themselves as ancestral by re-appearances of features in current generations, but otherwise are so far unknown as to be nameless, even by family tradition. They are shades upon the very banks of Lethe and destined sooner or later to lose their last hold upon authentic memory, and absolute forgetfulness is one day to take possession of them as they pass to Wardour-street. After this preliminary transmigration they may ultimately find themselves perchance enjoying an illusory revival, adopted for representatives of the remote ancestry of wealth which is of too sudden and recent an origin to have authentic record, even of a grandfather; so it is that the satirist is consoled for the seeming encroachment on ideal life of a spirit of dull matter of fact:—

> "No! for the age I've no alarms,
> Still bright shall glow Romance's fires,
> Whilst Herald's College finds our arms,
> And Wardour-street our pictured sires."

Friends and relatives who are interested in a portrait at the time of its production do not require a certificate of identity, and to inscribe a name upon it would naturally seem incongruous and even offensive as implying a possible failure of memory that could only be ever at fault from the dying out of affection or respect. When the interval between the ages of successive generations happens to be considerable, and especially when the transition is made further discontinuous by premature deaths or by habitual taciturnity of the elder branches, as to family matters, tradition may finally and irrevocably expire within twenty years. Let those who have had their curiosity aroused as to their predecessors declare how they have had to lament not taking timely evidence of the last survivor of a social connexion which retained vivid existence in one single vivacious memory, and with the extinction of that memory died out, instantly, entirely, irrevocably. The fly-leaves of the family Bible have ever but insufficiently supplemented that parochial record,—

> "Where to be born and die
> Of rich and poor makes all the history."

The suggestion is not trivial that every family should have its book of domestic record: a primary purpose might be to verify the mere sanitary history of childhood and youth, from vaccination onward, but among other notes,—usually doubtless the briefer the better,—places might with advantage be found for securing the dates and identities of portraiture. Thus much for the satisfaction of purely domestic interest and permanence of family tradition; but even so it would be well for the attachment of permanent inscriptions to portraits to be the rule; for the portraits are many which have a public as well as a private interest, and are liable to go astray from their best associations through the accidents of dissolution or dispersion of families.

Portraits, once safe in public institutions, are pretty generally inscribed, as, for instance, the interesting series in the rooms of the Royal Society at Burlington House, or the Architects' Institute, and that which commences with Count Rumford in the ante-room of the lecture-theatre in Albemarle-street. The only suggestion to be insisted on as desirable is that the dates of birth and death should, in every instance, be added. This is an addition which should be as absolutely the rule in the case of memorials in public places,—of statues of worthies, whatever the nature of their claims to such distinction. Certainly a public statue should never be erected in honour of one whose simple name alone does not carry the justification of the honour, like Cobden or Havelock, Peel or Peabody, Jenner or Rowland Hill. Properly funereal monuments, either in cemeteries, cathedrals, or abbeys, have a traditional claim to more diffusive inscriptions. Antiquity has bequeathed us many touching epitaphs, even on the personally insignificant. Many will recall the tender lines of Martial for the tomb of "little sweet Erotion," so beautifully rendered in English by Leigh Hunt. Here is a literal translation of a Greek epitaph dug up no long time since on the Isthmus of Corinth:—

> "The bonds escaped that nature held me in,
> Back to my source come I, Philostrata;
> For after four years upon ten completed
> I left the body in the fifth,—a maid
> Childless, unwed, unwoo'd: who finds a charm
> In life—may live to old age for me,—and welcome."

As regards personages more dignified we have the terse epitaph of the Scipio,—intermediately such an example as the grand four lines on the tomb of Gonzalo of Cordova, in St. Geronimo at Granada; and in our own country and later times we would not willingly be without such epitaphs as those on Christopher Wren, Goldsmith, and Howard the philanthropist, or lack even one more such an irreproachable model of a commemorative inscription as Professor Jebb provided for the pedestal of Macaulay in the ante-chapel of his college.

Any epitaph, or inscription either, to be justified must be concise, elegant, characteristic,

a

and true; when Prior, in his playful verses, "For my own Monument," gave notice that,—

> "Mat, alive and in health, of his tombstone took care,"

he gave warning at the same time,—

> "Then, take Mat's word for it, the sculptor is paid.
> That the figure is fine pray believe your own eye;
> Yet credit but lightly what more may be said,
> For we flatter ourselves and teach marble to lie."

Certainly his actual epitaph in the Abbey, whether entirely truthful or not, is much too diffuse. Still, it should not have provoked Dean Stanley to stigmatise his poetry as "poor," for Mat was master of his craft in a certain original style, and even in more than what Cowper affectionately calls "Dear Mat Prior's easy jingle," as surely as Swinburne is at present.

It is not so bad a fault for an inscription to be obscure and equivocal as to be false, and yet a fault it is to leave us hovering in choice between no meaning at all or too many. Such ambiguity especially besets an endeavour to be pointed as well as concise. An unlucky example of it is very frequently before us. As we enter the National Gallery we read below the bust of David Wilkie and the dates of his career, the line,—

> "A life too short for friendship, not for fame."

The intended meaning is doubtless that Wilkie's life was shorter than his friends would have wished it, but long enough to enable him to attain to high celebrity; yet this meaning has to struggle through such contesting suggestions as that Wilkie had no time to make attached friends while he was making himself famous,—or even that though his friends would have wished him with them longer, it was high time for him to die for the sake of his reputation. For eulogy to be perfectly graceful it must not only be manifestly sincere, but it must be exempt from any cloudiness that invites the cynical to misinterpretation of its terms, and it must be free, moreover, from obvious liability to awaken collateral incongruous associations. Lord Palmerston, if we may trust the Annual Register for 1861, did not wind up what is declared to be an eloquent eulogium of Count Cavour, without making more than one of these mistakes. "It might well be said of him,—so runs the closing sentence of the speech, that he had lived a life,—

> 'To point a moral and adorn a tale,'—

and though his death was premature, it could not be said that he died too soon for his glory and his fame."

In the last clause we have a repetition of the awkwardness of the monostich on Wilkie; its terms do not exclude the suggestion that in the interest of his fame it might have been as well for Cavour had he died a little sooner. This, doubtless, would be to wilfully misunderstand the orator; but eulogistic oratory, like Cæsar's wife,—though Cæsar himself had little right to stand on his dignity in the matter,—ought to be incapable of being misunderstood. The quotation is even more unlucky. A majority of Lord Palmerston's hearers would be certain to refer the line to its origin, Johnson's example of the vanity of human wishes in the close of headstrong ambition in humiliating failure of such a contrast to Cavour as Charles XII. of Sweden,—a celebrity only pointed at with scorn as having

> "Left a name at which the world grew pale,
> To point a moral or adorn a tale."

But our concern is not with Parliamentary, but with monumental recognition of the great, the distinguished, the interesting, more especially in the form of portraiture, with identifying titles and appropriate inscriptions, and though much more might be said upon this theme, at present let this be enough.

Christmas and New Year Cards.—S. Hildesheimer & Co. offered 2,000*l.* as prizes for the best designs last year, and afterwards spent 2,500*l.* more on other than prize designs. They have sent us a sample box of the results, and we are bound to say that they are excellent of their kind. As specimens of printing they are not surpassed. Their execution is attributed to M. Hagelberg, of Berlin. We praise them as of their kind, and we hope the retail dealers will look to them before they make their selections; nevertheless, we cannot help thinking, considering the enormous sums of money annually spent on such cards, that something more artistic, though possibly less attractive to the multitude, might be produced.

THE DECORATION OF ST. PAUL'S CATHEDRAL.

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

At the ordinary fortnightly meeting of this Institute, held on Monday evening last, Mr. Horace Jones, President, in the chair, among the members attending for the first time since their election were the President (Mr. Stevens, and Messrs. Murgatroyd and Holden, members, of the Manchester Society of Architects, who had come to London to confer with the Council on matters affecting the interests of provincial members of the Institute. The President assured them that the matters in question should have the serious and careful consideration of the Council.

The Secretary announced that Messrs. E. P. Warren and Percy Hunter had passed the Obligatory Examination held in November, and the Council had awarded the Ashpitel Prize to the candidate who had passed best in the three examinations held this year, viz., Mr. Thomas Purves Marwick, of Spottiswoode-street, Edinburgh. The silver medal offered by Mr. Ernest Turner for proficiency in sanitary science subjects shown by the candidates in the Architectural Examinations had been awarded to Mr. Charles Steward Smith, of Reading.

The Chairman said that it had been his pleasing duty and his high privilege to attend as the representative of the Institute at the opening of the Royal Courts of Justice that day, but in common with all the members of the Institute he could not but regret that he who had called forth the masses of stone, timber, metal, and other materials of which the vast building was composed, and had by his genius given them form and shape, was not present to see the completion of his work and to receive the reward which would have been his due.

Mr. Hebb wished, before the paper of the evening was read, to call the attention of the Council to the fact that the present Government had arranged for the re-opening of the inquiry into the circumstances attending the death of Mr. C. Chaloner Ogle, a young architect, and a member of the Institute, who was believed to have been murdered at Volo, in Thessaly, in the Spring of 1874. A previous inquiry had been held and closed without any satisfactory result being arrived at; but now that Thessaly had been ceded to Greece, the present Government had taken up the matter anew, and had commissioned Mr. Fawcett, her Majesty's Consul at Constantinople, to proceed to Volo to make further inquiry into the subject. He suggested that the Council should take into consideration the desirability of thanking the Government for the steps they had ordered to be taken with the view of vindicating Mr. Ogle's memory and of obtaining the punishment of those who had caused his death if it should be shown that his death had been caused in any felonious manner.

The Chairman said that the matter should receive the attention of the Council.

Mr. R. Popplewell Pullan then read a paper on "The Decoration of St. Paul's Cathedral." He said he hoped that his paper would be of interest to some of the members of the Institute, would excite few of them, irritate none, and be instructive to all. No question of the present day had roused so much party spirit as this question of the decoration of St. Paul's. For the past twelve years the cathedral had been the arena of a succession of fights, of the warfare of parties, and of the "Battle of the Styles." It was to be regretted that this had been so; for it was worse than puerile to bring party spirit to bear upon the solution of a problem on which depended our reputation for good taste, not only now, but in the future. The topic was a most absorbing one, and it behoved them all to watch very carefully everything that was done in the matter, lest some wrong and irremediable step should be taken. The matter was now in the hands of a sub-committee appointed by the general committee to act as an executive committee. The proceedings of the sub-committee were to be subject to the approval of the general committee, and afterwards to that of the Dean and Chapter, and when that approval had been given, the proposals were to be made public before anything decisive was done. It was thus very necessary that the public should be informed from time to time of the progress that was being made, so that when they were called upon to come to a decision they might be able to form a just judgment. But the questions arose, Who amongst the public were qualified to decide on such a matter? Who were the men who were most likely to be competent to form a correct opinion? What was duly-qualified public opinion? The only body of men who were qualified to come to a right decision were the members of the Royal Institute of British Architects, men who were accustomed to decorative designs in connexion with architecture, and who had, by study and observation of the best works in all countries, made themselves acquainted with the possibilities and limits of decoration. It was at one time hoped that the whole matter should be officially referred to the Royal Institute of British Architects, or the Royal Academy, which would have perhaps been very much the same thing, as the Academy would have referred it to its architect-members. The matter was now, however, in the hands of a sub-committee of representative men, and from that sub-committee he (Mr. Pullan) had received every courtesy when he submitted to them what was now regarded as a rival scheme, although at the time it was offered it was merely intended as a suggestion towards the solution of the problem. Soon after the report of the General Committee was presented, three years ago, he submitted to the sub-committee a scheme which was the joint production of himself and the late Mr. Heath Wilson, of Florence. Having reviewed the history of the movement for the decoration of the cathedral, Mr. Pullan described the iconographic scheme which was prepared by Mr. Burges, upon which unmerited obloquy was poured, one of the accusations made against it being that it was "Mediæval." Mr. Penrose exhibited a rival design. Some of the contributors threatened to withdraw their subscriptions unless Sir Christopher's intentions,—though nobody knew what these were,—were carried out. The minority of the committee vigorously protested, in June, 1874, against the majority's decision. All these influences told against the cathedral architect, and in November of the same year the Dean and Chapter resolved to rescind the agreements made with Mr. Penrose and Mr. Burges. In Mr. Pullan's judgment, there were many good points in the designs of both, and but for the violence of party spirit the work might have gone on. After the rejection of these designs there was a truce until 1876, when Mr. Oldfield published his very able letter to the Dean, in which he revived the whole subject. Of this pamphlet, and of its bearings on the problem of the decoration of St. Paul's, Mr. Pullan gave some account. He was, however, greatly scandalised by Mr. Oldfield's last recommendation to his colleagues on the sub-committee, which they had adopted. By it they were urged to dispense with an architect, and so to save money, whilst at the same time eliminating a frequent cause of division amongst their subscribers. Having repudiated architects, continued Mr. Pullan, they sought for a design from other sources, and at last unearthed a model on which Stevens, a sculptor lately deceased, had left some rough indications of his notion about the decoration of the dome of St. Paul's. The discovery of this model at that critical juncture was most opportune for them. It was a tower of defence for them against their foes. And they further strengthened their position by forming an alliance with the two greatest English painters of our day, Sir Frederick Leighton and Mr. Poynter. With both of these eminent men they made a formal agreement, stipulating that Stevens's design should be taken as a basis; that a full-sized coloured cartoon should be placed *in situ*, one portion of which was to follow literally or with some modification Stevens's design, the other portion being of a more conventional or architectural form; but in any case Stevens's arrangement was to be worked out and the frame to be filled with pictures, the subjects of which were to be taken from those suggested by Mr. Oldfield in a second letter to the Dean,—namely, scenes from the Apocalypse. The Dean and Chapter sanctioned the experiment, reserving to themselves full power of discussing the matter and also of rejecting the cartoons if they should be unsatisfactory. Now what, asked Mr. Pullan, was Stevens's model? A half dome on which were sketched roughly Titans, Telamones, angels, and squatting figures arranged to form something like ribs, with circular medallions on a plain gold ground to receive the cartoons. The design was without any architectural character, the dream of a man who had Michelangelo on the brain, and who was thought a man of the greatest genius, because he had executed a monument, full of fine details, to be placed in a position where they could never be properly seen. This was the Wellington Monument, a canopied tomb adorned with groups of figures so placed that little beyond the soles of their feet could be visible to the spectator. This tomb was to have been crowned with an equestrian statue of the great captain whom it commemorated, placed in such a lofty position that his nodding plumes would almost have swept the ceiling of the Consistory Court. This figure, however, the artist was compelled by public opinion to omit. The result was the leaving out of the crown of the design, which was thus made to finish in a plain table-top. Neither in the Wellington monument nor in the model for the dome did we recognise that perception of the fitness of things which was wont to characterise the man of the highest genius. Sir F. Leighton and Mr. Poynter, Mr. Pullan contended, ought never to have been pledged to adapt their pictures to Stevens's crude framework, which, with whatever proposed modifications, would always remain unworthy of the productions of their pencils. Mr. Pullan spoke next in detail of the design jointly prepared by himself and his friend the late Mr. Heath Wilson. The fundamental principles which guided the two friends in the production of their design* were then expounded. According to Mr. Heath Wilson, the Court of Heaven, as described in that grand triumphal hymn, the "Te Deum," commended itself to the judgment of the two friends, as offering subjects individually graphic, appropriate, and impressive, and which, when united, might be brought effectually within the strict conditions of decorative art. They aimed at an embodiment of prayer, praise, and thanksgiving as expressed in the "Te Deum." They prepared a drawing,—one-sixth of the full size,—of an eighth part of the dome, proposing to divide the entire circle into eight equal parts by means of ribs, richly decorated and of large proportions. These would spring from eight thrones, each filled by a seated prophet, a figure which, if erect, would be 18 ft. in height. These would form noble themes for a great artist's powers of design, admitting of exalted idealism and thoughtful action, combined with religious sentiment and fervour. The spaces between the ribs were occupied in the lower portions of the curve of the dome with an architectural composition in two zones, consisting of a podium or basement, with a corridor above, intended to recall in a measure the general design of Sir James Thornhill, which may have been approved by Sir Christopher Wren. This structure, with a baldacchino in each central space, was meant as a background to the figures thronging this portion of the cupola. An Apostle was enthroned under each baldacchino. The martyrs were grouped on each side and in front of the basement. The architectural forms, the ascending aërial perspective of which had been graduated with much care, were relieved against the pure azure of the whole upper curvature of the dome, on which depended, in considerable measure, the beauty of this part of the design. As the azure ascended it grew paler, till it melted into pure white. On the surface of this azure were ranged angels, excelling in brightness as they rose rank above rank.

The Chairman, in inviting discussion, said the meeting was thankful to Mr. Pullan for having put forward his views on this important question, the consideration of which was one demanding great care. It was to be hoped that all the discussion and consideration which had been given to the subject would eventuate in the happy and satisfactory execution of the work. He should be glad to hear the views of Mr. Penrose on the matter.

Mr. Penrose, Surveyor to the Dean and Chapter of St. Paul's, said he was only in a position to say a word or two on the question. If Mr. Pullan invited the members of the Institute to an academic discussion as to the best style of decorative treatment for a large domical church, he should consider the subject as being very useful for the consideration and guidance of those who had charge of the cathedral, and of the decoration committee. If, however, Mr. Pullan invited discussion on the merits of a scheme put forth in rivalry with the scheme which was being prepared under the guidance of the committee, such discussion would be decidedly premature, for the Institute had not before it the materials for enabling them to form an opinion on the subject. Only a part of the proposal which was under the consideration of the sub-committee had been seen at all. There was more to come from Stevens's designs than had yet been shown. There were, he thought, ample safeguards against anything being done in haste. The sub-committee who were charged with the preparation of a design in conjunction with the painters would have to get the approval of the general committee, and if the general committee passed the design its adoption was still subject to review by the Dean and Chapter. He did not think that Mr. Pullan had been just to the memory of Stevens, either as to the Wellington Monument or his design for the decoration of the dome. For the reasons he (Mr. Penrose) had given, he asked the Institute not to commit itself to any opinion on the subject at present.

Mr. Stannus observed that Mr. Pullan had shown by his paper that he was not fully cognisant of the state of affairs in connexion with the matter under consideration. He (the speaker) would briefly narrate his own part in the matter. He had been a pupil of Stevens, and had been elected an Associate of the Institute, when he was commissioned by the sub-committee "to prepare, in conjunction with Mr. Poynter, and subject to the approval of the committee, a full-sized cartoon." On receipt of this commission he went to France and Italy, where he spent the months of October, November, and December of 1878 in making studies of all the good dome treatments he could find, in order to the more fully fit himself for his work. When in Rome, towards the end of his journey, he made a modification of Stevens's design, which he brought back and worked out on the scale model. That design was submitted to the sub-committee forthwith, but, as Mr. Poynter was not then prepared with his version of Stevens's design, it (Mr. Stannus's design) was kept in abeyance in deference to Mr. Poynter until this year, when Mr. Stannus was commissioned to prepare an experimental full-sized cartoon, to be fixed in the cupola simultaneously with the other. Thus there would be two designs,—first, the modification by Mr. Poynter (*not* by Sir F. Leighton), which he (the speaker) ventured to call a painter's interpretation of Stevens; and secondly, the modification by himself, which was an architect's interpretation of the same thing. He regretted to have to give these details, and to mention his own name so much, for it would be well if all names could be forgotten, and the work judged impersonally. His own modification was really only the combination of the most characteristic portions of Stevens's design and of the rib treatment suggested in a design by Mr. Penrose some years ago. He (the speaker) plagiarised that design unconsciously, but the credit of the idea was none the less due to Mr. Penrose. Mr. Pullan had found fault with the sub-committee for having, as he said, "repudiated architects," and for having in their report "altogether ignored" the architectural profession. He (the speaker) did not speak of himself as being of much account; but surely Mr. Penrose was an architect, even according to Mr. Pullan's ideas. And what were the words of the committee? They said,—

> "Although the adoption of Mr. Stevens's design as a basis for their operations will enable the committee to dispense with the services of an architect for the purpose of furnishing designs, it is evident they will require the assistance of some properly-qualified person," to help them with contracts, supervision, dimensions, &c.; and they, "being of opinion that Mr. Penrose possesses all the qualities requisite for such a post, recommend his being employed to perform those duties, and generally to assist and advise them in carrying out the decoration of the dome."

That extract would suffice to show that Mr. Pullan's inference was unjust to the sub-committee. Further, Mr. Pullan had not been quite fair to Stevens. He praised Sir Frederick Leighton and Mr. Poynter,—and everybody wished that they might both be long spared to enrich English art with the noble creations of their pencils; but Stevens was dead, and not here to explain his intentions or defend their results. Mr. Pullan had spoken of Stevens as "a sculptor lately deceased," as if to imply that, being a sculptor, Stevens was not fitted to decorate St. Paul's. Mr. Pullan surely ought to have known that Stevens was pre-eminently an artist,—neither sculptor solely, nor solely painter, architect, or ornamentist, but possessing that balanced mastery over all which made an artist. He was, of all Englishmen, living or dead, just the man fitted to design this work, and Mr. Pullan's want of knowledge of this greatest of English decorative artists, whether his fault or his misfortune, was fatal to his pretensions to criticise the actions of the sub-committee in working upon the design. Of Mr. Pullan's opinions about the Wellington Monument, he (the speaker) would only say that in another fifty years, when those who were there assembled had all been duly assessed and shaken down to their proper places, there would be no need to brush away any cobwebs from Stevens's name. But on Mr. Pullan's statement, given as a fact, that "the nodding plumes" of the surmounting equestrian statue "would almost have swept the ceiling," he (Mr. Stannus) might say that the full-sized figure of the Duke as modelled by Stevens (and which was in the speaker's possession) had no plumes in the hat, which was to be in the hand of the figure. And he might further state that when commissioned by Her Majesty's Office of Works to superintend the completion of the monument, he measured the vertical distance from the present summit of the monument (which Mr. Pullan had termed "a table") to the ceiling, and found it to be 18 ft. Mr. E. J. Poynter, whom Mr. Pullan characterised as one of the greatest English painters of our day, said, in a letter to the *St. James's Gazette*, in July last,—"I have never kept out of sight either the design, or my immense admiration for it and for the magnificent genius who produced it." But Mr. Pullan had spoken of "rough indication" of Stevens's "notion," and said his "crude framework" would always be "unworthy of the productions of the pencils" of Sir F. Leighton and Mr. Poynter. The quotation just made, and the manner in which these two eminent artists were content to work out Stevens's design, showed what *they* thought. Mr. Pullan had spoken of the sub-committee "further strengthening their position" by forming "an alliance" with Sir F. Leighton and Mr. Poynter. To any one who knew the chivalrous sense of honour of Sir F. Leighton and also of Mr. Poynter, and who knew the sub-committee, it was astounding that such an imputation should be made. The sums these "two greatest English painters of our day" were to receive, though great, were yet much below what they would receive for similar work done for private clients. It would have been only decorous on Mr. Pullan's part to have exhibited Stevens's design, or at least a sketch of it; but he had asked the Institute to confirm his judgment,—an *ex parte* statement. On the charge that Stevens's design was one without architectural character, it might be suggested that one unfailing test of the architectural fitness of any superadded work (and decoration is, *ab origine*, a superadded work) was, Did it fit on to what already existed? Let them examine Stevens's design to see. There is a peristyle below the cupola consisting of thirty-two pilasters, spaced equally, with voids at the axial points. There are windows between the pilasters arranged in eight groups of threes, the groups being axial with the eight arches of the dome, and between these eight groups of windows the other inter-pilastral spaces are occupied with niches. Let it be observed how Stevens arranged an attic balustrade proportioned to the supporting order, how the balustrade was broken over the pilasters, and how by that expedient he tied the design together and fitted the superadded to the existing work. This, which was one of the features, and was a distinctly new treatment, would suffice to show whether Stevens's design had architectural character. Again, the adaptation of the circular frames, which Mr. Pullan improperly termed "medallions," was also a distinct invention of Stevens's. It was well known that every section of a sphere was a circle, and that simple fact had been taken advantage of by Stevens in his design. The large circular panels were the most characteristic feature of Stevens's design. They gave opportunity for storiated panels without lines which sag in the centre, as all rectilinear panels on a concave surface must. It had been objected that they would form ellipses, owing to the perspective, but this distortion through foreshortening happened to all visible objects, and the eye was accustomed to and allowed for it. Another advantage of the arrangement of circles was that they made a pattern, as it were, all over the dome, and gave a marvellous unity which did not exist in any other treatment with which he was acquainted. That quality of "all-overiness," if he might be allowed to use the term, was, in fact, only another proof of Stevens's subtle feeling that the cupola was a roof which covered, and not a ribbed transparency to be looked through. A further feature in Stevens's design is the arrangement of the thrones; these are combined with the balustrades, so that the capping of the pedestal forms the seat, while the back of the throne is inclosed by pilasters and a circular pediment; and the whole forms a striking central feature over each of the eight arches. Stevens might have mixed up his thrones and his ribs, and produced a confused effect in the ribs and a bald effect in the space between; but he had more architectural feeling, and he had evidently considered the view as seen by a spectator on the floor of the cathedral. Any one entering St. Paul's by the western door sees first of all the vaulting of the nave and chancel, and a portion of the podium of the "whispering-gallery"; when under the western dome he can see as high up as the middle of the windows in peristyle. He must advance one bay before the commencement of the cupola is visible, and it is only when he has arrived at the arm of the cross that he can see the entire height of the cupola. Now, this gradual unfolding or *apo-kalupsis* of the cupola was certainly one of the data of the problem, and any design must not only fill the mind when the culmination of the whole is seen, but should satisfy the eye at each successive stage. Testing Stevens's design by that canon, the decorative value of the fine group of the axial throne, with the superincumbent circle, would be recognised even before the whole cupola was visible. The placing of all the features on a ground of gold, which permeated everything, was, considering the normal gloom of the dome, not the least of Stevens's valuable ideas. Those who had seen the interior of St. Mark's at Venice would be convinced on that point. Mr. Pullan had criticised the ribs in which the telamons occur. He (Mr. Stannus) was not concerned to defend them; he fully admitted that the whole design was merely a sketch,—that the world lost Stevens before he had completed the working out of his idea; he had probably intended some modification. The ribs, however, were not the finest nor even a necessary or characteristic part of Stevens's design. The manner in which he had fitted his design to the existing architecture, the arrangement and proportion of the circles, the eight axial thrones, and the gold ground permeating all, were to be regarded as the essential features of his legacy towards the solution of the problem. These all showed subtle architectural feeling on Stevens's part. It should be borne in mind that there were such things as designs with architecture introduced, as well as designs with architectural feeling, and that the former did not necessarily imply the latter. There might be, for instance, a design in which sham shelves, brackets, walls, colonnades, and ribs were shown in incongruous style; but of such an imaginary build-up it might be considered that less architecture and more architectural feeling would be desirable. With regard to the scheme of storiation prepared by Mr. Edmund Oldfield, M.A., one of the sub-committee, it was not his (the speaker's) function to defend it, but he would remind the Institute that scenes from the Apocalypse were suggested for the dome in Mr. Burges's iconographic scheme of 1871. In conclusion, Mr. Stannus said he quite agreed with Mr. Pullan as to the importance of the problem, and the necessity of preventing irremediable mistakes; but as the whole scheme was to be fully before the public after it had undergone the ordeal of discussion by the Dean and Chapter and the committees, Mr. Pullan was crying out prematurely. The sub-committee were surely entitled to a trial before condemnation, and most people were content to wait until June next for the experimental cartoons to be *in situ*. Friendly discussion and enlightened criticism would be unquestionably of great service at the proper time, but it was to be regretted that Mr. Pullan (who was so competent to enrich the "Transactions" of the Institute by dissertations on other subjects) should have prematurely brought forward the question of the designs for the decoration of St. Paul's. As Stevens's design was still *sub judice*, he hoped that neither it, nor the action of the sub-committee in adopting it, would be prejudged.

---

* Mr. Pullan exhibited a large painting of this design by the late Mr. Heath Wilson and himself.

Mr. C. Henfrey said that, as a subscriber to the decoration fund, he must express his disappointment with the proceedings of the committee up to the present time, for they seemed to have devoted the whole of their attention to the decoration of the dome. He should like to see, when he entered St. Paul's, something like the decorative effect in the body of the cathedral which he saw at St. Peter's. The subscribers would like to see something for their money. He had heard the cost of decorating the dome in mosaics put at 40,000*l.* He doubted whether, after incurring that expense, the result would be satisfactory. For the greater part of the year the general effect of the figure subjects would be indistinct, and only the intervening "sploshes" of gold would be visible.

Mr. Ewan Christian said that with regard to the view urged by the last speaker as to the decoration of the body of the cathedral, Mr. Penrose ought to be consulted before anything was done in that direction. He believed that Sir Christopher Wren never asked for any decoration for the main parts of his structure, except only the dome, and he also believed that if Wren could have lived to see the results of some modern attempts at polychromy in churches, he would not have desired to put a bit of colour on the walls of the cathedral. He believed that Wren's intentions as to the parts of the building where he intended colour to be applied were very clearly indicated. Where he had not intended the stonework to show he had covered it with plaster. It was on that account, among others, that he had objected to Mr. Burges's proposal to skin the stonework of the interior and to case it with marble.

Mr. Penrose said it was distinctly stated in the *Parentalia* that those parts of the building which were to be decorated were coated with cockle-shell lime.

Mr. Christian, continuing, said it would be a great pity if Wren's grand work were destroyed by the general introduction of colour, however cheaply it could be done; but it could not be done very cheaply, for it had cost between 6,000*l.* and 7,000*l.* simply to clean the walls of the cathedral. He did not wish to pass any opinion on the design exhibited, but, from the sketch made by Mr. Stannus upon the blackboard, it appeared that the right thing was in contemplation.

Mr. Edward Armitage, R.A., said that as a painter who had had some experience in mural decoration, he might be allowed to say a word or two on the subject of the paper. He agreed that it was quite premature now to express an opinion upon the comparative merits of Mr. Stevens's design, or the modifications of it, and the one which Mr. Pullan had exhibited. It appeared to him (the speaker) that the dome did not require any decoration, for it was always lost in gloom. He would rather confine the main decoration to a frieze (such as that executed by Flandrin in the Church of St. Vincent de Paul, Paris,) running round the drum of the dome. If, however, the dome itself was to be decorated, he did not think it was a matter of much moment, from an artists' point of view, whether the subject chosen was the Apocalypse or the Te Deum, for to most observers who did not know what the subject was, a large number of figures painted in the dome would merely present a succession of riddles. He had no doubt, however, that Sir Frederick Leighton and Mr. Poynter would be able to show good reasons for their proposals, whatever they were.

Mr. J. P. Seddon, in proposing a vote of thanks to Mr. Pullan for his paper, said that while he agreed that the discussion of the subject in the form in which it had been brought forward was somewhat premature, it should be remembered that the subject was one to which Mr. Pullan had devoted much study. For his (the speaker's) own part, he so greatly admired the dome as it is, as seen dimly through the hazy atmosphere, that he found it difficult to conceive of anything that would look better or more beautiful. Before anything was done for the decoration of the dome, he should like to see some experiments tried on those parts of the cathedral which were nearer to the eye, as, for instance, upon the shallower domes, portions of the chancel, and other parts which seemed to lend themselves to, and even to cry out for, decoration.

Mr. Ralph Nevill said he was very glad to hear Mr. Armitage urge that very little decoration should be put into the dome. He thought that Stevens's design would be very suitable, if not filled in too solidly, and treated in a broad-way so that no part should obtrude itself upon the eyes. But the suggested ribs should be eliminated, for ribs totally destroyed all the beautiful effect which was gained by building a dome.

The Chairman, in putting the vote of thanks to the meeting, said he thought they had had a most interesting discussion, which had at any rate served to bring the subject more prominently and more clearly before them. There would, however, be wisdom in waiting a little before coming to a conclusion on the subject.

Mr. Pullan, in replying, said his paper had been characterised as premature, but it was three years since the design he had exhibited was made, and he had waited year after year to see what the committee proposed. Mr. Stannus had made light of the ribs in Stevens's design, but they appeared to him to be the chief feature in it, notwithstanding Mr. Stannus's beautiful explanation of the circles. In the thrones in Stevens's design there were large figures seated, and those figures would appear from below to be supporting, Atlas-like, the large circles, not unlike huge spheres, above and behind them. Exception had been taken by Mr. Stannus to the statement that the committee had formed an alliance with Sir Frederick Leighton and Mr. Poynter, but he had not used that expression offensively, but simply as a statement of fact. Notwithstanding what had been said by Mr. Stannus in defence of the Wellington Monument, he (Mr. Pullan) adhered to his view that if Stevens had been a man of the greatest genius he would have seen the absurdity of cramming a monument of such dimensions into the circumscribed space which it occupied. However, on the main question, he trusted that, as everything advanced by opposition and criticism, the discussion of that evening would advance the decoration of St. Paul's.

PROVISION OF BUILDINGS FOR SCIENCE AND ART IN GERMANY.

The following sums have been set down for the requirements of science and art in Berlin in the budget proposals to be submitted to the Prussian Diet:—For the purchase of the Niederländische Palais for enlarging the Royal Bibliothek, 2,600,000 marks (130,000*l.*); for the acquisition of a site in the Potsdamer Strasse for the Royal High School of Music, 779,100 marks (38,955*l.*); for enlarging the testing laboratory of the Royal China Manufactory, 22,500 marks (1,125*l.*); for facing the Royal Schauspielhaus with sandstone, 135,000 marks (6,750*l.*); towards the building fund for the Natural History Museum at the Neue Thor, 500,000 marks (25,000*l.*); for the foundation of an Historical Seminary, 10,400 marks (520*l.*); for cleaning and arranging the objects found at Pergamos, 28,000 marks (1,400*l.*); for the Ethnological Museum in the Königgrätzer Strasse, 800,000 marks (40,000*l.*); towards the building fund for the Technical High School, 450,000 marks (22,500*l.*); for rebuilding the Silesian Railway Station, 150,000 marks (7,500*l.*); for the construction of a public mortuary for Berlin, 200,000 marks (10,000*l.*). Total, 283,750*l.*

FLOOD PREVENTION WORKS AT NINE ELMS AND BATTERSEA.

With the view of preventing the serious damage to houses and other property by the constantly-recurring overflow of the Thames, the Wandsworth District Board of Works are at present engaged in raising the river-wall at different points between Nine Elms, Battersea, and Wandsworth. These works are being carried out, amongst other places, at the Nine Elms-lane draw-dock; the entrance-gates to Downey's dock, dock-road; the public way to the river in Nine Elms-lane; premises in Albert-road; the public footpath at St. Mary's draw-dock; the footpath in front of St. John's Training College, Battersea; and the draw-dock at York-place, Battersea. The extreme abnormal height to which the river has risen within the last two or three years, during exceptionally high tides, has been ascertained, and at all the several points named the river boundary-wall at the water's-edge will be raised to a level higher than that which the tides have ever yet reached, which, it is expected, will be an effectual barrier against flooding in the event of future high tides.

"ON SUNDRY WORKING DRAWINGS." *

I have referred to the subject of roof tie-beams, the essential necessity of which our forefathers frankly accepted, as was their wont, and tried to make the best of. The modern mind, however, seems to abhor ties, and one of the problems that I have continually had to endeavour to solve has been how to construct church roofs without any visible ties, and that often to cover walls of less than Mediæval thickness, and of more than ordinary spans. In Kent and some other of the south-eastern counties, half-barrel shaped roofs are not infrequent, but they are generally provided with efficient supports in the shape of tie-beams with ring-posts and braces. There is one of early date, well moulded, at Salmestone Grange, near Margate. At Eythorne, near Dover, I succeeded in reproducing all these features in the new roofs, which I found it was absolutely necessary to substitute for old decayed ones. But at Great Kimbale, in Buckinghamshire, when I put a similar roof to the chancel of the parish church, it is even now in contemplation to cut away and dispense with the obnoxious tie-beam and king-post, because it happens, from some points of view, to appear to cross the upper part of the eastern window. This leads me to notice and to utter a protest, however unavailing it may be, against the absurd modern craze for an undisturbed vista from one end to another of our cathedrals and churches. All mystery and effect is thus sacrificed, and the interiors of our ecclesiastical buildings become as bald and as bare as those of barns. In the Church of Great Kimbale, to which I have alluded, I met with the worst example in my experience of walls having been thrust outwards by the spreading of their roofs, but I succeeded in restoring them bodily to their proper upright position, without having them rebuilt, as at first appeared necessary. This I was able to accomplish by the simple expedient of having them hauled up by ropes attached to windlasses outside passing through the opposite openings, after having previously disengaged the bases of the several columns of the arcades, and subsequently underpinning them.

It is noticeable that all these old church roofs were constructed, however rudely, in oak, and that they have owed their duration to the extreme tenacity of that timber, in spite of all the adverse circumstances to which I have called attention. They have in very many cases been renewed or altered at a far later date than the ages of good church architecture, probably in rude imitation of the former ones, but with inferior construction; or perhaps the timbers of the old roofs had become decayed at their feet only from contact with the damp walling, and their ends having been cut off, they have been re-used and re-framed, and so made to do duty again for a roof of lower pitch than the original. This may generally be discovered by finding the marks of the previous roof against a tower or the end gabling, and I lately found this to have been the case at the parish church at Betchworth, in the county of Surrey. In this case, also, disused and displaced mortise-holes betrayed the fact, together with the construction being inferior to any real Mediæval work, the struts having been only nailed to, and not housed into the rafters and collars. The roof had been covered with exceedingly heavy stone slabbing, which had been improperly bedded completely in mortar, which, by capillary attraction had rotted the lathings of the tiling and the ceiling between the rafters; these, again, being too close to each other, had left but little intermediate air-space (another frequent cause of similar disaster). The roof timbers had, in consequence, sunk under their weight, and become dislocated at their points of junction, and the walls had yielded to their pressure, and so the complete restoration of the whole had become imperative.

The present almost prohibitive cost of oak, and difficulty of getting it seasoned, import another element for consideration into this already sufficiently vexed question of restoration; for the character of construction, what was suitable to that denser material is not so when fir has to be used instead. As an example, therefore, of the manner in which I have endeavoured to solve this problem in connexion with that of the non-toleration of ties, I may call your attention to the working drawings which I have just prepared for this particular case at Betchworth. In the first place, I relinquished the use of the framed couples alone, which I consider is only desirable when oak can be obtained. For this treatment I have substituted one in which principals are introduced at moderate distances apart; and, to avoid the intrusion of ties, I have had to place the collars high up. I have made continuous curved braces to sustain them, and by connecting them thoroughly to the principal rafters reduced their thrust to a minimum. I find, however, in looking over my folios that in general I seem to have preferred to adopt, whenever I could, roofs with half-barrel shaped ceilings rather than those left open to the ridge, as in the last case described. The reason is that I consider the former the better adapted to maintain an equable temperature within buildings, and to give greater facilities for ventilation by means of the space that is left in them between their outer covering and the ceiling below the collars and braces, and also that they transmit better to a distance the sound of the voice. Then, again, the distance between the covering and ceiling gets rid of the danger of dry rot, already spoken of as very likely to occur when the covering is of tiles bedded in mortar or cement, and there is but little space for air between it and the ceiling, which, if of plaster, is impervious, whether this be between or below the rafters themselves. And yet the outer covering of roofs should be made impervious, or else it is but of little use to attempt to warm by artificial means the interior of a church. With the ordinary coverings used for the sake of economy, the heat evaporates through them almost as fast as it is generated, and the air of the interior, getting rapidly cooled by contact with the cold covering, descends, and causes the draughts so bitterly complained of by congregations. The least that ought to be done is to cover the rafters with stout boarding, ploughed and tongued, with asphalted felt laid upon it, and, above this, battens about 2 in. by 2 in. should be placed diagonally to brace the whole roof, and to allow any rain driven in under the tiles or slates to pass down to the eaves. The tiling or slating battens should be fixed upon these. I should even advise the boarding to be doubled, and to have plain felt between the two thicknesses, as well as the asphalted felt above them. Then the outer covering can be laid, as it should be, without mortar or cement. The construction of this class of roof will be that in which principals are used with purlins to support the rafters, and cradling to carry the ceiling; and I shall call your attention to the working drawings of several of such roofs in connexion with some of the buildings I am about to mention.

At Great Yarmouth I have had considerable experience in connexion with half-barrel shaped ceiled roofs of large spans. It was in the year 1862 that I received the commission to undertake the restoration of the noble Church of St. Nicholas in that town. This, as you are doubtless aware, is one of the largest, if not the largest, simple parish churches in existence. The special peculiarity of it is that all its aisles have the immense internal width of about 40 ft. This commission was the more gratifying to me as I had been entirely unacquainted with the place and its inhabitants until I was informed that the committee had decided upon offering the work to me. I mention this fact because, although for very many years my relations with this work were of the pleasantest, and I was permitted to control all that was done at the church, in order that one mind might guide the whole, after a time that rule became relaxed, and I resigned in consequence. I am glad, however, to learn that it has lately fallen into the able hands of Mr. Pearson, under whom I trust that the work may be satisfactorily completed. Some of the roofs and walls had fallen into a similar state of dilapidation to what I have been describing in other cases, and from the like causes. The first of the roofs that I had to replace there was that of the chancel, which has a span of only 25 ft. For this it was desired that I should, and I was able to, follow the old construction of framed couples, and to employ the same material as before,—that of oak. But when, later on, I had to undertake that of the vast south aisle of the nave, I found that practically neither was admissible, nor could I venture to introduce there any ties, as there had not previously been any. I therefore worked out the problem afresh, with fir for the material, and with principals and purlins and cradling for the ceiling, the result of which was entirely successful.

This Church of St. Nicholas, though very impressive from its great scale, is not satisfactory, in that its nave and chancel are less in width than their respective aisles, the former having about 25 ft. span and the latter 40 ft. In the new church dedicated to St. James, at the southern extremity of the same town, which is now in course of erection from my designs, I tried, while keeping somewhat to the same scale, to correct this disproportion, and so made the width of the central compartment about 35 ft., and that of the aisles 25 ft. The site that I had to deal with in this case was almost square, and I therefore adopted the Greek cross as the type for its plan. There are but four columns in the interior, and the central crux compartment is covered by a segmental dome of concrete carried by the four large arches and four smaller ones spanning the angles of the crux in place of pendentives. This it is my intention to have decorated with Rust's mosaic. In the pulpit I used the same material of mosaic in connexion with decorative stoneware from the Fulham potteries, resting on a base of polished serpentine. Such materials, some specimens of which have been sent by Messrs. Belham for your inspection, I have found to give facilities for the introduction of constructional and durable colours into buildings, the want of which I had long previously felt and deplored. The interior of this church is lined with buff-coloured brickwork, diapered with red, and its exterior is likewise constructed with considerable variety of colour in flintwork and red and black brickwork and stone dressings. The roofs are of the character of those described at St. Nicholas's; and indeed in the general size and scale of the parts I have tried to adapt in St. James's Church such of the characteristics of its mother-church as had impressed me with admiration, and had appeared to me to be desirable to introduce into the ecclesiastical architecture of our own time.

I now propose to lead you right across England to the opposite coast of Wales, where it has fallen to my lot to carry out some of the most important works that have been entrusted to me. My first introduction to that neighbourhood was in the year 1863, during which I received a commission from Mr. Thomas Savin, of Oswestry, to whom the principality of Wales owes a great part of its railway accommodation. That gentleman asked me to make a survey at Towyn, in North Wales, where he contemplated laying out for building all the land lying between two of the stations of his coast line. When that was finished he desired me to proceed to Aberystwith by a morning train, so as to be able to advise him in the evening of the same day as to some additions he proposed should be made to the building in that town known as Castle House, in order to convert it into an hotel. This was, as I found it, a large and complicated collection of buildings, of which the nucleus was a triangular structure with an octagonal tower at each corner. This central portion had been built by Nash, to whom London owes Regent-street. Having taken a rapid survey, I made a sketch design for a wing to be built southward of the above-named structure, along a narrow strip of land lying between the road and the cliff. This was intended to contain a large saloon to serve as a dining-room about 100 ft. long, having eight bay windows overlooking the sea, and at the further end of this was another octagonal tower. Mr. Savin approved this design at once, and desired me to lay out the foundations of it on the following morning, ordering some thirty men to be on the spot to receive my orders. This I accordingly did, after which I proceeded to town to complete and send down the requisite drawings. In order to provide as many bed-rooms over this saloon, without interfering with its area by any supports except those afforded by its external walls, I projected the outer face of the first floor to the front of the bay-windows by means of arches spanning from one bay to another, and constructed the partitions with queen-truss framing, which permitted of openings in the middle of the transverse ones for a central corridor. The longitudinal ones again rested upon these latter, and were framed likewise with openings for doorways in the middle of each of the rooms so divided off. These trussed partitions provided also the strength requisite for a flat roof over the whole, proposed to be covered with asphalte upon concrete, and

---

* From a paper by Mr. J. P. Seddon, read before the Architectural Association on the 24th ult. See p. 706, *ante*.

to serve as a Belvedere, whence any number of visitors congregated on it might enjoy the extensive coast and sea views obtainable from it. This flat was approached by three circular staircases within turrets, from the saloon and bed-room floor and waiters' rooms. Since the conversion of the building into a college this space has been enclosed, and provides a large recreation apartment for its students. My employer, acting as his own builder, decided, to my regret, to execute this wing in brickwork, to be covered with cement. This being the case, I designed the upper portion in timber-framed construction, with brick panels to be cemented and ornamented with incised work and coloured so as to produce effect.

During the progress of this southern wing, I one day received a summons by telegram from Mr. Savin to go down to consult with him in the evening about the construction of another wing northward of Mr. Nash's building. I was again allowed no time for the preparation of working drawings, but was instructed to proceed then and there to carry out my approved sketch, 500 men being told off to execute the work, the whole of whom I had to keep well employed. This time, however, I was permitted to have my own way as to material, and I consequently selected Bath stone for the dressings, relieved by blue Pennant stone from Hanam, near Bristol, for the columns, and a local cinnamon-coloured stone from a quarry belonging to Mr. Savin for the wall work. The principal entrance was arranged in the centre of the building, at the back, where there not being space sufficient for any porch of an ordinary rectangular form, I designed the triangular one, which was erected, and gave every facility required. Adjoining the entrance-lobby on one side was the principal staircase within the tower, the plan of which is trefoil-shaped, next the street. On the side is a special staircase to what was intended as the billiard-room and its appurtenances. The billiard-room is of an oval form, and capable of holding three tables with bays on either side for spectators. Underneath this apartment, on the ground-floor, is one which was intended as the bar, and whence the approaches to nearly all parts of the building could be commanded. The intermediate floor was required to be of great strength, so as to obviate all danger of vibration to the billiard-tables. To accomplish this purpose, being indisposed to use girders, I designed a special system of flooring, in which, although the span is 25 ft., no piece of timber deeper than 9 in. was used. The joists, 9 in. by 3 in., were strengthened by struts underneath, disposed in such a manner as to carry a cradling for boarding ceilings, with moulded ribs, which were, in fact, shallow vaultings in woodwork, and possessed of very great bearing power. This same method of flooring I afterwards used for several of the other large rooms in this building, as well as in a mansion at Abennaide, near Aberystwith. For the large saloon, about 80 ft. long, intended as a drawing-room, and a smaller adjoining one in this north wing, I adopted trefoiled shapes for the plans of the bays next the sea, and utilised an irregular piece of ground on one side of the former for a series of vaulted recesses, separated from the room by a stone arcade with marble columns; and at the end of the room is a segmental apse with a range of traceried circular windows in stone, to be filled with ornamental glass.

Before leaving the neighbourhood of Aberystwith, I may mention some particulars in connexion with the restoration of the noble cruciform Church of Llanbadern, which originally was a cathedral, and is situated about a mile from that town. This has been a work which has extended over a very considerable portion of my professional career. It has been carried out in successive portions, as the collection of the necessary funds has permitted. It commenced with the restoration of the nave, and the rebuilding of the porch in the year 1868. The tower and transepts were restored in 1878, and the work to the chancel is now in progress. The first portion was begun before the establishment of the Society for the Protection of Ancient Buildings, which at the second stage in the proceeding, though they did not honour me with any notice of their intention, sent a protest to the committee against the further prosecution of the work. Other antiquaries, however, of equal zeal and ability, and greater courtesy, had at the very commencement interested themselves on behalf of the venerable fabric, in particular the Rev. Mr. Petit, to whom Llanbadern Church had always been dear, and who has given one of his characteristic sketches of it in his work entitled "Petit's Church Architecture." That gentleman, anxious to learn what was proposed to be done to the structure, asked Mr. F. Penrose, the architect, to confer with me on the subject on his behalf. Recognising at once the propriety of the feeling which had dictated this step, and the courteous manner in which it was conducted, I addressed myself to furnish sufficient accurate particulars to enable a fair judgment to be formed. I directed measurements to be taken at distances of 10 ft. apart the whole length of the church, from lines plumbed from the base, and these showed the precise amount that the thrust of the decayed roofs had pushed the walls outward. This, in fact, was found to be not less than 13 in. in a height of 19 ft. The consequence was that Mr. Penrose intimated to me that it was obvious that the condition of the fabric was as dangerous as I had reported it to be, and that the work proposed was necessary. The special characteristics of this church are extreme simplicity in combination with the grandeur that results from largeness of scale, each arm and the tower being 40 ft. wide externally. The only place where any richness of architectural detail had been indulged in was in the southern doorway, where the jambs were in three orders, shafted with rudely-carved capitals, and the arch was richly moulded, the details being of the characteristic Early English work of the district. All the original windows had been simply narrow lancets. These were rather curiously grouped in the west end of the nave and end of the south transept as triplets, one light smaller than the others being raised much higher. Those of the eastern end had been superseded, with an advantageous effect of concentrated light in that part, by a large Perpendicular window, with a smaller one of the same style on either side of the chancel. These, which are still dilapidated, the former having its mullions and tracery of wood, and the latter being blocked up with masonry, I propose to restore and reglaze. The original levels, or in some cases slopes, of the floors were sought for, and when ascertained were replaced. The floor of the nave was to slope upwards very considerably from the western end to the tower. In the new roofs which I had to design I adopted that character which my previous experience at Great Yarmouth had convinced me to be the best for such a span,—32 ft.; that is, with principals and cradling for the ceilings. The ceilings I have varied, increasing them in richness eastwards; and in that under the tower floor I have adopted wooden vaulting to support and make rigid the beams that existed before. In the same manner, in the chancel, its ceiling is made to serve the same purpose for its old but rude oak roof, which it proved possible to retain. In my designs for the flooring or paving and furniture, which were all necessarily renewed, I have introduced an increasing amount of richness of detail eastward, with the view of enhancing by contrast the effect of the extreme simplicity of the architectural features of the stone structures of the church, which I have not ventured to alter in any way. I may call attention to the working drawings of the pavement under the tower as being composed of the mosaic of Mr. Rust's manufacture in combination with tiles executed by Mr. Godwin, of Lugwardine, from special designs of my own representing subjects from the Apocalypse. In the chancel of Holmer Church, near Hereford, and in some other places, I have also used this same series of tiles, but without mosaic.

Having described the new Church of St. Paul, Hammersmith (of which we published the illustrations and particulars in our last), Mr. Seddon said,—In the work of building the new Church of St. Andrew, at Redruth, in the county of Cornwall, I am associated as joint architect with Mr. James Hicks, of that town. The plan is that of a very wide nave with exceedingly narrow aisles, intended to serve as mere passages; beyond are north and south transepts and the chancel and chancel aisles. The east end of the nave is polygonal below and rectangular above. The site is on the slope of a steep hill, and thus space is obtained underneath the western portion of the church, and this is utilised for vestry accommodation and for Sunday schoolrooms. The approach from the basement story to the church is arranged so that the choir may file upwards by two staircases around the font, and then uniting, pass in procession down the central passage of the nave to the chancel. The district of Redruth possesses many striking varieties of building stone, most of which we propose to make use of in the following manner:—In the first place, granite will be used for all the quoins of the main angles of the building and for the buttresses. The chief element of expense in its use is that of the labour of dressing it, and not of the material itself, for the hills surrounding the town are chiefly composed of granite of the finest quality, samples of which may be seen in the balustrading of the Thames Embankment. The cost of working mouldings, undercutting, or tracery, however, renders it inadmissible for such purposes. Box-ground Bath stone, from the quarries of the Messrs. Pictor, has been chosen from among the west-country oolites, in consequence of its excellent weather quality, for the finer dressings of the outside, and Corsham Down for those of the inside of the church. But Bath stone will be used as sparingly as possible, and only for the finest of the dressings. The secondary quoins and bands shown on the drawings are of a local stone of a deep-brown colour, which when used alone for large masses of walling has a very sombre effect; but it forms an excellent bordering to inclose panels of brighter and more cheerfully-coloured stones, such as white and red granite spauls, spar, Alvan, and other waste stones obtainable there at almost nominal cost. The above stones, which are of light grey colour, will be used for plain arches. We hope thus to show in solid and picturesque construction the adaptability of the several varieties of the peculiar building stones of the immediate neighbourhood, and I am assured by Mr. Hicks that this result will be obtained at less cost than if any one particular kind of stone had been selected for use throughout, for while all those mentioned can be easily obtained in moderate quantities, no one sort can be had in sufficient amount without special quarrying.

THE PANTHEON.

At the last meeting of the Architects' Society of Berlin, Herr Adler read an important paper on the Pantheon at Rome, recapitulating the latest conclusions as to the origin and purpose of that celebrated edifice. Among the numerous archæological investigations which have of late been pursued in the Italian capital, there are few of greater interest than those connected with this building. Recent excavations have laid bare the ground in the immediate vicinity of the Pantheon, and have thereby raised afresh the question as to the object for which it was originally erected. According to one well-known theory, the Pantheon was simply a grand vestibule to the Thermæ of Agrippa, which stood immediately in the rear of it. Another view is that it was itself a great bathing-house, a swimming basin, or *frigidarium*. A third hypothesis is that the edifice was built prior to the Thermæ. It is certain that at one time the Pantheon and the Thermæ were architecturally connected. The other thermal establishments of ancient Rome all show great similarity of plan to the Thermæ of Agrippa; moreover, it is certain that the domes of the baths of Constantine and Caracalla were really employed as bathing-halls. But in spite of these facts there are technical and architectural data going to show that, originally at least, the Pantheon was not used for such purposes.

It was formerly generally believed that the architect of the Pantheon was Valerius of Ostia, and that the building was dedicated to Jupiter Ultor, but this view has long been abandoned. In the writings of Pliny and Dio Cassius, the name "Pantheon" is frequently met with, and this fact is the more important as the former author had seen the edifice in its original form as it existed prior to the great fire which, at the time of the Emperor Titus, laid in ashes a large portion of Imperial Rome, then a comparatively newly built or recently rebuilt city. We know from various inscriptions that have been preserved that the Pantheon was the place in which councils were frequently convened to deliberate upon affairs of State. We know from the same source, too, that it contained the statues of heathen deities. Moreover, Dio Cassius has recorded that Agrippa intended to erect a statue of Augustus Cæsar within the building, and to confer upon the edifice the name of the Augusteum. This honour, however, was declined by the Emperor Augustus, but he assented to his statue being placed in the entrance-hall and Agrippa's being set up opposite to it.

There appears, indeed, hardly a doubt that the Pantheon was erected as a common divine temple for the worship of the Gens Julia. The part of the city where it stood was at the time called New Rome, and was, in fact, the scene of the great architectural creations of Augustus Cæsar. The entire structure and fitting up of the Pantheon point with almost perfect certainty to Augustus, the ruler who had given peace to the world once more, as principally concerned in its origination.

Assuming, then, that the Pantheon was a temple of the gods and heroes, the further question arises, how many statues it contained. There were eight niches in it, one of them serving as the entrance. It is probable, therefore, that the statue of Cæsar stood in the principal axis, and that ranged on either side of him were those of Romulus, Julius Cæsar, Æneas, Anchises, Mars, and Venus,—from the last-mentioned goddess it is well known that Cæsar insisted that he was directly descended. Between the chief niches there were eight smaller ones somewhat projecting, and these possibly contained statues of other gods and heroes. A somewhat surprising fact in connexion with the dome is that the axial division of the ribs of the cupola does not correspond with the arrangement of the ground-plan. It shows multiples, not of eight, but of seven, whence it appears clear that the architect deemed it proper to lay particular stress on the niches occupied by the images of the gods.

Respecting the original distribution of the space and the construction of the Pantheon, the speaker had permitted himself in the year 1871 to publish his hypotheses on the "Winckel Programme." To his remarks then he now adds that the caryatides were erected in the interior by Agrippa, and that the interior capitals, probably for the sake of greater despatch in completing them, were of bronze. It has been conjectured that for similar reasons the caryatides, too, may have been made of bronze, and this would explain their disappearance at the time of the great fire.

At the close of the sixteenth century, Palladio, it is well known, took measurements and drawings of the Thermæ that were then accessible at Rome. Unfortunately this collection, which has been preserved, is not accompanied by any text or by a statement mentioning what was really in existence at that time and what additions Palladio may have made for the sake of completeness. It is, however, interesting to find that the newest excavations have confirmed the correctness of the plan he gives of the Thermæ of Agrippa. According to Palladio, there was no direct connexion between the bathing establishment and the Pantheon. The former, on the contrary, only touched the latter through a niche in which the remains of a pedestal are still to be seen, and upon which some large group or other was placed. It is established, therefore, that the Pantheon was never the vestibule to the Thermæ, nor was it itself a great swimming-bath or basin, or anything of that kind.

The Thermæ of Agrippa, as Herr Adler showed, contained not only bathing compartments, but all the fittings of a Greek gymnasium; and on comparing them with the Thermæ of the later Imperial times, it is found that the latter are simply a variation of Agrippa's Thermæ. It is, therefore, of special interest to know what was the origin of the latter. The grandeur of the dome and the monumental splendour of the entire plan of the edifice indicate at once that this cannot have been a first attempt, but that it was founded on preceding models. These were not in Rome. They belonged to a country where bricks were employed in building, a country where Oriental baths were required, and where gymnastics were practised after the Greek fashion. Hence it is probable to conjecture that the models of the Roman Thermæ are to be sought for in the Euphrates Valley, and in the period after Alexander the Great. The grand ruins of the city of Seleucia, which Sallust calls the greatest in the world, *maxima orbium*, have hitherto remained unexplored. But it is well known that Seleucia exercised an influence on cities to the West, especially on Antioch and Alexandria. It is more particularly the architecture of the last-mentioned city that deserves attention in this inquiry, as Alexandria was well-known to Augustus and Agrippa through the struggle with Mark Antony. It was there that stood the Soma, the colossal tomb built to contain the body of Alexander. There, too, was the Panion, an artificial mound or hill built after the style of the Babylonian and Assyrian terrace pyramids, with a serpentine passage leading to its summit. Let it be remembered that the tomb of Augustus at Rome likewise consisted of a great artificial hill or mound, and, moreover, that Egypt was the original land of all associations of deities. It will then appear that the unknown architect of the Pantheon must have come or derived his model from Alexandria.

The strange position of the Pantheon before the Thermæ, with which,—according to a former conjecture of Herr Adler's, a conjecture confirmed by the latest excavations,—it was connected by ten walls, is to be explained by the fact that under the circumstances it was only thus possible to erect the building at all. The old Romans hated everything Greek: they despised Greek gymnastics. It is, therefore, not improbable that, after the analogy of other traditional examples, the erection of the Pantheon was in the first instance only the result of a vow,—perhaps for the victory at Actium,—and that the thermal establishment was built near it purely as a matter of chance.

In conclusion, the speaker proceeded to defend the study of the origin of the Pantheon by the fact that it exerted enormous influence on almost all succeeding epochs of architecture.

MR. RUSKIN ON CISTERCIAN ARCHITECTURE.

"Cistercian Architecture" was the subject of which it was announced that Mr. Ruskin would discourse on Monday last at the London Institution, Finsbury-circus, in lieu of "Crystallography," as at first arranged. Anticipating a crowded audience, our reporter, desirous of obtaining a seat convenient for hearing, arrived at the Institution forty minutes before the time announced, but he found every seat in the lecture-theatre, and even the steps of the gangways, occupied at that time, and had to content himself with a standing position in the gallery, which, with the approaches thereto, was greatly overcrowded. However much this overcrowding may have testified to the popularity of the lecturer, it likewise afforded testimony as to the badness of the arrangements,—indeed, it may almost be said, the utter absence of arrangements,— made by the officers of the Institution, who, when the theatre was full, should have refused to allow more people to crowd into it and into the approaches. The pressure of the crowd was so great that the progress of the lecture was several times interrupted. Ladies who had fainted could not be got out, owing to the one exit being densely packed with people. Had a panic arisen the results could not but have been very serious, and it is to be hoped that something will be done to mitigate this danger. Mr. Ruskin (whose voice is weaker than it was some years ago), contrary to his usual custom on such occasions as this, read from manuscript, and read somewhat rapidly, so that, under all the circumstances, it was impossible for our reporter to hear and record all that the lecturer said.

Mr. Ruskin, after expressing the pleasure which it gave him to be present, said he owed an apology to his audience for changing the title of his lecture. There was, however, a most consolatory paragraph in the *Globe* the other evening, which advised him that all his titles were equally good and appropriate, whatever the subject might be. Now, the *Globe* was rather in the right, for, in truth, the lecture on "Crystallography" would have contained a good deal about Cistercian architecture, and it was only by great self-denial that "Crystallography" had been excluded from "Cistercian Architecture." Among the circumstances of his early life for which he was most thankful, and for which he looked back with more than filial gratitude, was his father's fixed habit of stopping patiently at some roadside inn on his journeys into the country, while he (the lecturer) was making himself acquainted with every feature of the castle or every nook of the cloister which existed in the locality through which his father was travelling. In his visits to those romantic buildings immortalised by Sir Walter Scott, he took an interest, as a child, which had a marked effect on his whole subsequent life. Brought up in the strictest principles of Calvinism, however, he never heard his parents speak slightingly of those to whom we were indebted for the introduction and spread of Christianity in these islands, and never heard them cast any doubt upon the sincerity of the faith of Catholicism. But, in common with most English people of their day, they were suspicious of the monastic as distinguished from the clerical power, and it was an inevitable conclusion to a visit to Bolton or Jedburgh that it should be pointed out to him how careful the monks were to secure the richest lands of the most sheltered valleys for their abodes. But, admitting that to have been the case, were the monks to be reproached with selfishness? Did they labour for themselves alone? The sagacity which discerned, and the industry which redeemed, waste lands at riversides from inundation and fever should be remembered to the credit of the valley monks, who, primarily successful in agriculture and architecture, were to be distinguished from the higher or mountain monks, and from all subsequent brotherhoods,—whose life of meditation was inconsistent with those practical labours which are beginning to be discerned by history as being probably the most vital elements of civilisation during a period of which the lecturer could scarcely speak without sketching the rise and deline of ecclesiastical politics. There remained now only eighteen years between the close of the present year and the opening of the twentieth century, and these 2,000 years he would divide into four periods of 500 years each, which presented distinct series of phenomena. In the first 500 years we had the fall of the Roman Empire, the extinction of ceremonial paganism, the establishment of the early traditions of the Church, and the completion of the Vulgate translation of the Bible by St. Jerome. In the second 500 years the proper work of the Church began, the work of the hardworking saints, not of the St. Catherines, the St. Michaels, and the St. Cecilias,—although he was pleased to find that parish clergymen were beginning to recognise St. Cecilia, and he could not help wishing that she were a little more cared for at the "Monday Populars." In the third 500 years we had, in no small degree owing to the energy of the Cistercian order, the creation of Gothic architecture, including the resuscitation of the art of painting, lost with Apelles. In that period there were perfect laws of honest commerce depicted on the walls of churches; there was a perfect scheme of Christian education defined for the people on the walls; and a perfect picture of civil justice was afforded when the kings and barons of England submitted their quarrels to the decision of ecclesiastics. What had we to show as the products of the present and fast-concluding vista of five hundred years? We had printing, gunpowder, steam, dynamite, liberty, science, Parliamentary eloquence, and the Parliamentary *clôture*. There were strongly-marked and trenchant lines of separation between these four periods,—lines not always seen by historians, who, although they recorded the different locks of guns and links of armour that prevailed in different reigns, often seemed to regard it as a matter of no concern whether kings were enthroned under round or under pointed arches. In the year 480 there was born in Rome a boy, the son of a senatorial house, who was brought up during his childhood amidst all the pride, pleasure, and atheism of Rome, and, as Mr. Froude had said, there was no atheism like that which existed in Rome at that time. When the boy was fifteen years of age he resolved to break with these associations, and escaping from his father's house he took refuge in the hills of the Campagna. His friends made diligent search for him, but in vain. He founded, on the site of a Pagan temple, the Monastery on Monte Cassino,* whence was disseminated the Benedictine gospel, which taught that the performance of useful labour was man's duty on earth. M. Viollet-le-Duc had given a vivid picture of things as they were at Monte Cassino; he was most careful and impartial as an historian, and he (the lecturer) owed as much of pleasure and of profit to Viollet-le-Duc as an historian as he had suffered from the quite conscientious idea on the part of that distinguished man that Gothic architecture ought to be restored to its pristine power in the cities of France. Viollet-le-Duc's mistaken love for Gothic architecture had led to the destruction of many precious monuments by restoration at the hands of his assistants, and the work had been carried on since his death. He (the lecturer) was, however, glad to be able to pay a tribute to the perfect science of Viollet-le-Duc's structural architecture, and to the perfect candour of his history. We who lived in the present day could with difficulty conceive the disorder which followed the fall of the Roman empire in the West. In the midst of the chaos, the monks descended from Monte Cassino, and spread themselves through Germany and the North of Europe, founding monasteries which became centres of industry and homes of security for the peasantry. They restrained and controlled watercourses, reclaimed and cultivated waste lands, and in doing all this they set an example of self-denial which was not without its effect on the people. Before the close of the year 1000 the Benedictine order had founded no fewer than 15,700 houses or abbeys, each with its abbot, who was partly a schoolmaster, partly a bishop, and, it might be said, partly an innkeeper; in short, he was a man who was concerned for the welfare of the bodies as well as of the souls of others. He possessed power independent of, and often in rivalry with, episcopal pretensions. When Cluny was founded, its lands were given by the dukes of Aquitaine, and the walls were raised by the kings of France. Citeaux, on the other hand, was founded in a marsh by poor monks. The lecturer next proceeded, by the aid of a plan of the Monastery of St. Gall (enlarged from Viollet-le-Duc), to explain the arrangement of a Benedictine house. As showing the importance with which the work of the gardener was regarded by the order, it was pointed out that the gardener's house was nearly as big as the abbot's house. Opposite, and in due symmetry with it, was the doctor's house, with its separate garden for medicinal herbs. Then there were workshops and farm buildings. "Work-*shops*" he had called them, although there was no selling here,—all was given. At Cluny goldsmiths' and jewellers' work was the leading industry followed, and what sort of work was done there in those times was still to be seen in the brooch which clasped the mantle of St. Louis. At Citeaux and at Clairvaux other industries were followed, but in each establishment there was a monk charged with the distribution and organisation of the work. In conclusion, the lecturer observed that Cistercian architecture was kept subdued by the severe lessons of St. Bernard; and by restricting itself always to the materials close at hand, it succeeded in producing always beautiful structures; severe lessons he had called them, though they were really loving lessons in the true sense. The chief direction in which these lessons told in architecture was the forbidding of everything that was ludicrous and that was cruel. The life and labours of the Cistercian monks in building, in agriculture, and in the keeping alive of the learning of the ancients, were fraught with important lessons to the people of the present day, who were too prone to take as their motto "Let us eat and drink, for to-morrow we die." St. Bernard said, "Let us watch and pray, for to-morrow we live." He (the lecturer) felt much more like one who needed to be preached to than like one who should presume to preach to others, but he trusted he might be allowed to say, "Let us labour joyfully while we have light, for we know not what shall be ours on the morrow."

---

* Some account of this famous abbey and of the work carried on there for centuries will be found in the *Builder* for 1879, p. 1193

THE VICTOR EMMANUEL MONUMENT, ROME.

The Italian Government has determined not to carry out any of the numerous designs which were sent in early in the present year in the prize competition for the national monument to Victor Emmanuel, views of some of which we gave. On the contrary, it has decided to open a new competition. The committee charged with the supervision of the scheme held a meeting recently, the Minister of the Interior in the chair; and it was resolved that the conditions of the new competition should be as follow:—The Victor Emmanuel monument shall stand at the eastern point of the Capitol, in place of the Franciscan monastery and the barracks of the city police, occupied in ancient times by the temple of Juno Moneta, the base being equal to that of the church of Sta. Maria in Arscœli. The principal subject is to be an equestrian statue of the king. The front of the monument will look to the north and towards the Corso-street, which is to be lengthened up to the foot of the Capitol, and to be brought into connexion with it by help of a monumental free staircase. The designs are to be sent in by December 1st, 1883. The competition is entirely open, foreigners being permitted to compete with native artists on equal terms.

THE NEW LAW COURTS.

THE GREAT HALL.

The Great Hall of the New Law Courts, which is represented in our illustration, forms a most important feature in that series of buildings, and very naturally an architect of the late Mr. Street's ability did not overlook its importance. In it he has left us a structure which must challenge much criticism. The hall is undoubtedly a noble work, and is possessed of considerable dignity; its great simplicity, solidity of construction, and refined detail, cannot but merit the approbation of all lovers of Gothic architecture. With regard, however, to its proportions we are not quite so prepared to express unqualified satisfaction. We do not for a moment suggest that they are ill-considered, unpleasing, or unscientific; but they are so far removed from those which one expects to meet with in such a building, that the mind is certainly rather surprised, and apt to question such a remarkable departure from the general usage; and the first impression is that we are in the nave of a church. It must, however, be acknowledged, on behalf of the lamented architect, that in England, at least, we are unaccustomed to secular buildings of the precise style which he has here adopted; that we have no large halls with vaulted roofs; and that, owing to the unfortunate selection of the site, the building was cramped for space, and height was a necessity for the sake of efficient lighting.

The proportions of the hall are as follow:—Length, 230 ft.; height, 80 ft.; width, 48 ft. It is divided into nine compartments or bays by clusters of columns supporting the vaulting, which is domical, the domes springing from boss to boss instead of from arch to arch, as is the more usual practice; thus the arches which separate the bays occur at the highest portion of the dome, and the boss at the lowest. This gives the vaulting a rather singular effect when seen from either end of the hall. The building is lighted by very lofty windows of two lights, having richly-shafted jambs and mullions, except the two windows at the north and south ends; the former of which is a simple Early English triplet, and the latter a composition of five lancet lights with cusped heads. Below the side windows are richly-foliated cornices, and below this again large plain spaces left for future decoration. Round the lower portion of the hall the wall is adorned by a charmingly-designed arcade, interrupted at regular intervals by acutely-pointed double doorways, which possess very rich mouldings and foliated adornments. Beneath the large windows at either end are galleries. That at the south end is supported upon three arches boldly corbelled out; the centre arch opens to the vestibule, and the two which flank it form blank recesses; the whole is of Hopton Wood stone. The gallery at the north end is supported upon demi-vaulting springing from three corkscrew columns, and below are two open arches communicating with the great corridor. There are two smaller openings above leading into the balcony from the upper corridor. It cannot be denied that there is a good deal of cleverness about these galleries, but the detail is so very singular, and they have the appearance of being a late Gothic idea translated into early work. This is especially the case with the gallery at the north end. We cannot reconcile ourselves to the twisted columns; they introduce an element of weakness just where strength is especially wanted.

The pavement of this hall, which was executed by Messrs. Burke & Co., of Newman-street, from a design by the late Mr. Street, is a very fine work, composed of marbles of various colours arranged in patterns. The windows are glazed in ornamental patterns, with shields introduced in coloured glass, the work of Mr. Bell. The iron gates and grilles filling in the entrance arches, &c., are by Mr. Potter, of South Molton-street. The clerks of the works were Messrs. Lewis & Moore. We subjoin a list of the general dimensions of som of the principal halls in Europe, which will serve as a guide for forming an estimate of the size of the hall of the New Law Courts:—

1. The great hall of the Palazzo Ragione, Padua, erected between 1172 and 1219 (roof a century later): Length, 240 ft.; width, 80 ft.; height, about the same as the width.

2. Westminster Hall: External length, 270 ft.; * external width, 74 ft.; height, about 90 ft.; internal length, 240 ft.; † internal width, 68 ft.

3. The Wladislawschen Saal, in the Palace of the Hradschin, at Prague, completed in 1522, but commenced half a century earlier: Length, 212 ft.; width, 60 ft. Unfortunately the floor of this noble apartment has been raised, and its original height cannot be clearly ascertained; it is vaulted.

4. The Salle des Pas Perdus, in the Palais de Justice, Paris (commenced 1622): Length, 216 ft.; width, 84 ft.; height, about 60 ft. Unlike all the other examples named in this list, it has a row of columns down the centre.

5. Guildhall, London: length, 153 ft.; width, 50 ft.; height, about 60 ft.

6. Christ Church Hall, Oxford; length, 115 ft.; width, 40 ft.; height, 50 ft.

7. The "Golden Hall," at Augsburg, Bavaria: length, 110 ft.; width, 58 ft.; height, 52 ft.

8. Hampton Court Palace Hall: length, 106 ft.; width, 40 ft.; height, about 50 ft.

9. Middle Temple Hall: length, 100 ft.; width, 40 ft.; height, 50 ft.

10. Lambeth Palace Hall (rebuilt, in imitation of the ancient one, by Wren): length, 93 ft.; width, 38 ft.; height, about 50 ft.

The only one of these halls which is vaulted with a regular Gothic cross-vault in one span is that of the Wladislawschen Saal at Prague. Its length and width, compared with the hall of the New Law Courts, are as follow:—

Law Courts: length, 230 ft.; width, 48 ft.
Prague: „ 212 „ „ 60 „

Thus it will be seen that the hall of the Law Courts, though considerably longer than the Prague hall, is far narrower; so much so, that the entire superficial area of the Wladislawschen Saal is 12,720 ft., whereas that of the Law Courts is only 11,040 ft.‡

The Royal Courts of Justice were opened by Her Majesty the Queen, with a state befitting the occasion, on Monday last. The ceremony in the great hall being concluded, the Royal procession arrived at the gate at the north-western corner of the great quadrangle, where the carriages were waiting. Here Her Majesty paused for a few moments, while Mr. Shaw-Lefevre, the First Commissioner of Works, presented Mr. A. E. Street, son of the late Mr. G. E. Street, the architect of the new Courts,§ and Mr. H. W. Bull and Mr. E. C. Bull, the contractors, to each of whom Her Majesty spoke a few words of congratulation. A deputation of the workmen who have been engaged on the building then came forward and presented the following address:—

> "May it please your Majesty,
>
> We, the workmen of the various crafts employed in the construction of this building which your Majesty has now been graciously pleased to open, desire to take this opportunity of offering a humble expression of loyalty and respect towards our Sovereign. We are deeply sensible of the honour which has been done to the work upon which we have laboured for so many years, and our one regret is that the great master whose designs we have carried out should not have been spared to see this day.
>
> Signed on behalf of the workmen,
>
> Thomas Epps,
> Frederick Clarke."

To this Her Majesty's gracious reply was as follows:—

> "I receive with pleasure the loyal address of the workmen of the various crafts employed upon this building. I congratulate you on the successful results of your honourable toil, and I join with you in the expression of sincere regret that the designer of this noble edifice should not have lived to see the completion of his work." §

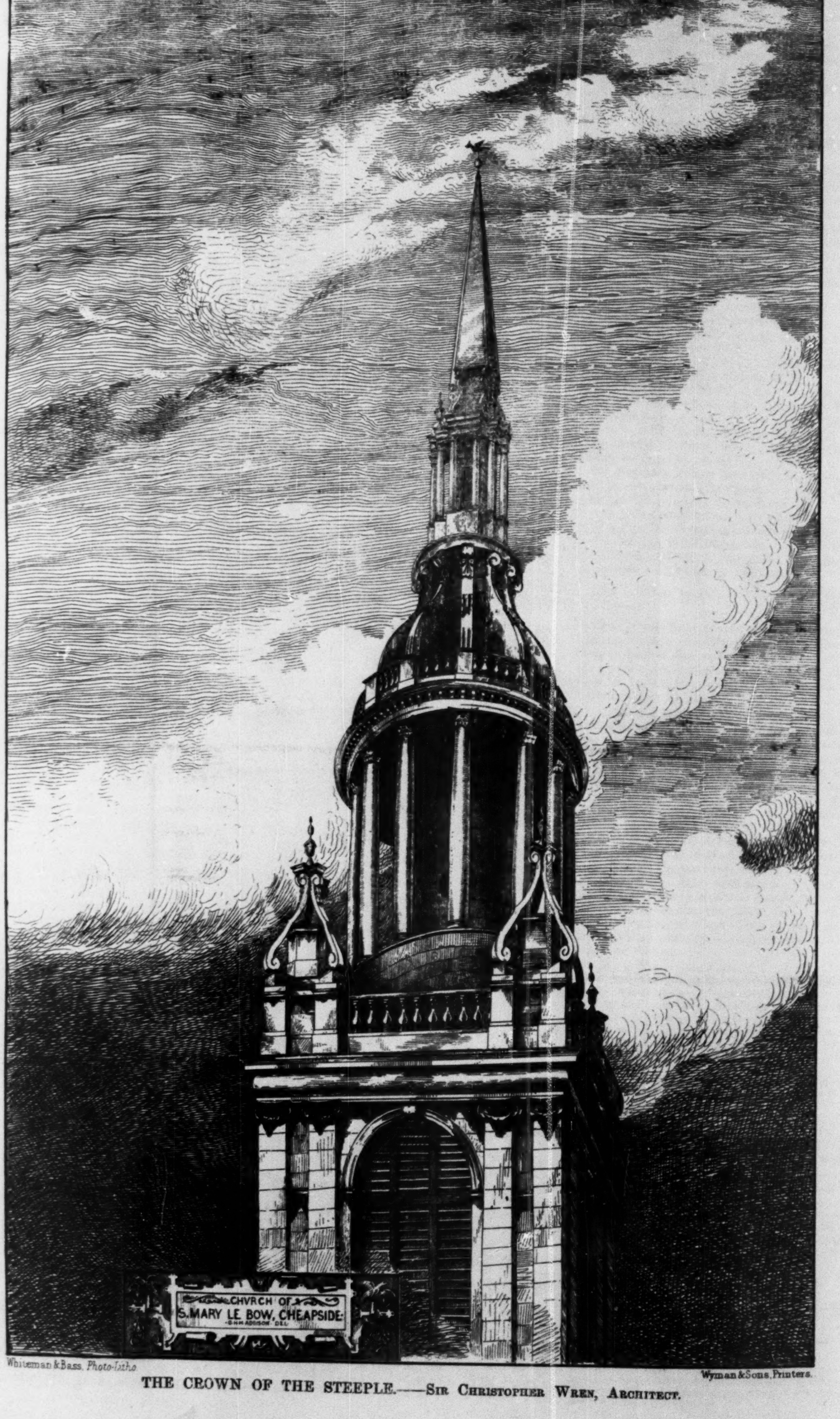
---

* This includes the modern addition to the north.

† Exclusive of modern addition to north end.

‡ Mr. Street's competition design was illustrated in vol. xxv. of the *Builder* (1867), pp. 112, 645; the plan of Court Floor, as determined for execution, was given in vol. xxviii. (1870), p. 666; and a view of the Strand front appeared in vol. xxix. (1871), p. 947.

§ Mr. A. W. Blomfield, to whom, in conjunction with Mr. Arthur Street, the completion of the buildings was entrusted by the Office of Works, was unavoidably absent through a domestic bereavement, which every one who knows him regrets deeply.

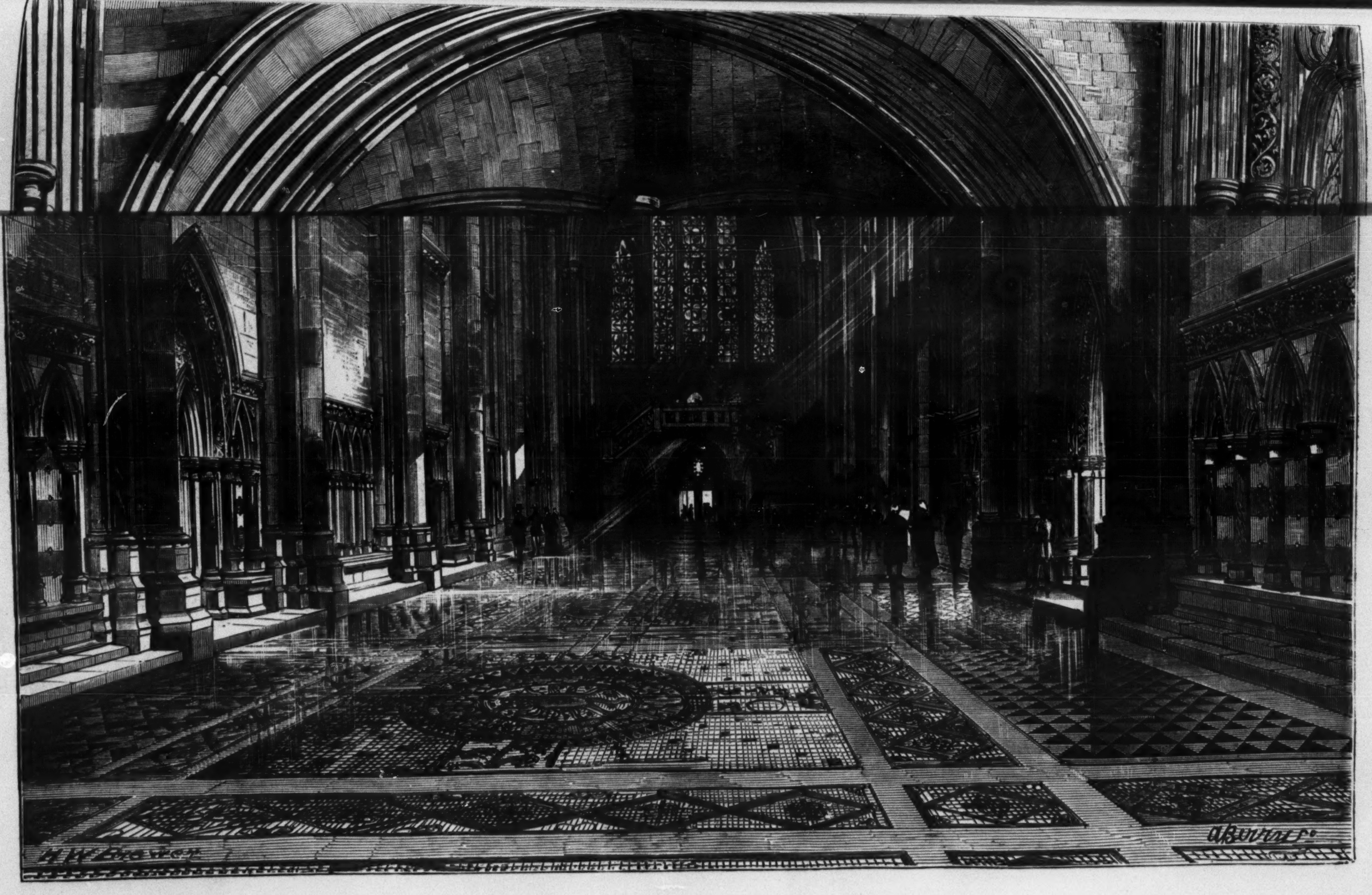


CHVRCH OF
S. MARY LE BOW, CHEAPSIDE·
·G H MADDISON· DEL·

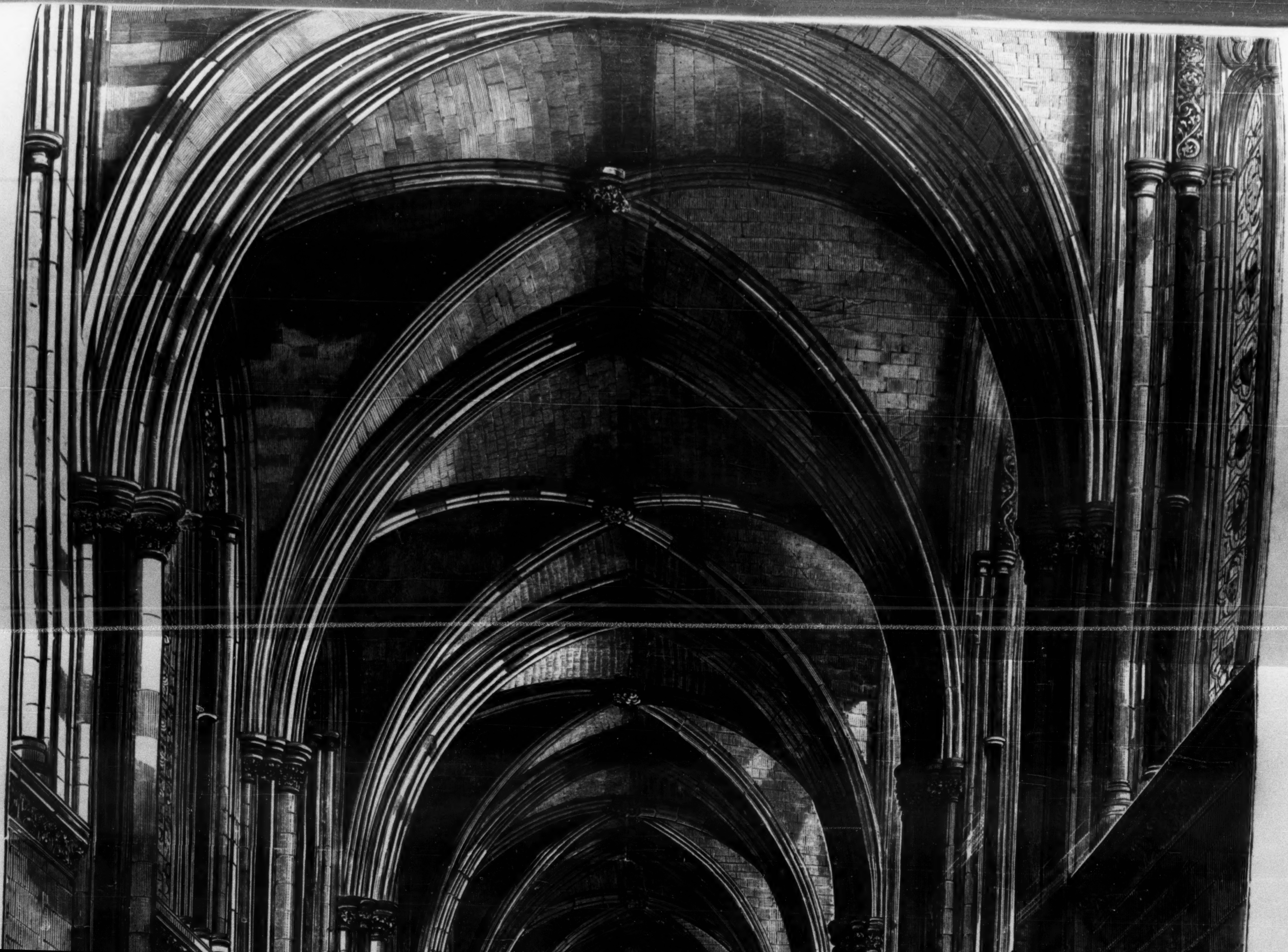
Whiteman & Bass, Photo-Litho.

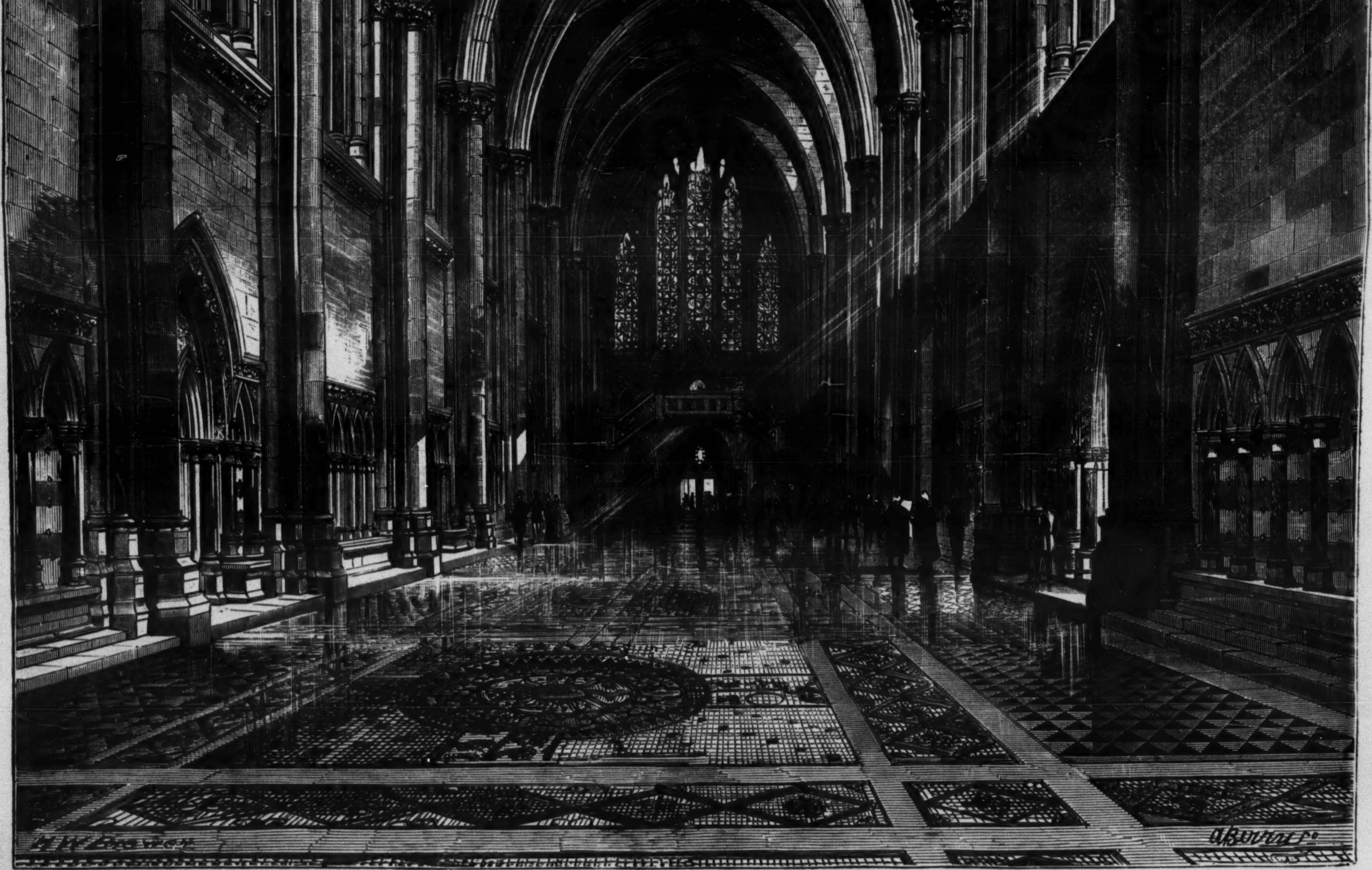
Wyman & Sons, Printers.

THE CROWN OF THE STEEPLE.—SIR CHRISTOPHER WREN, ARCHITECT.

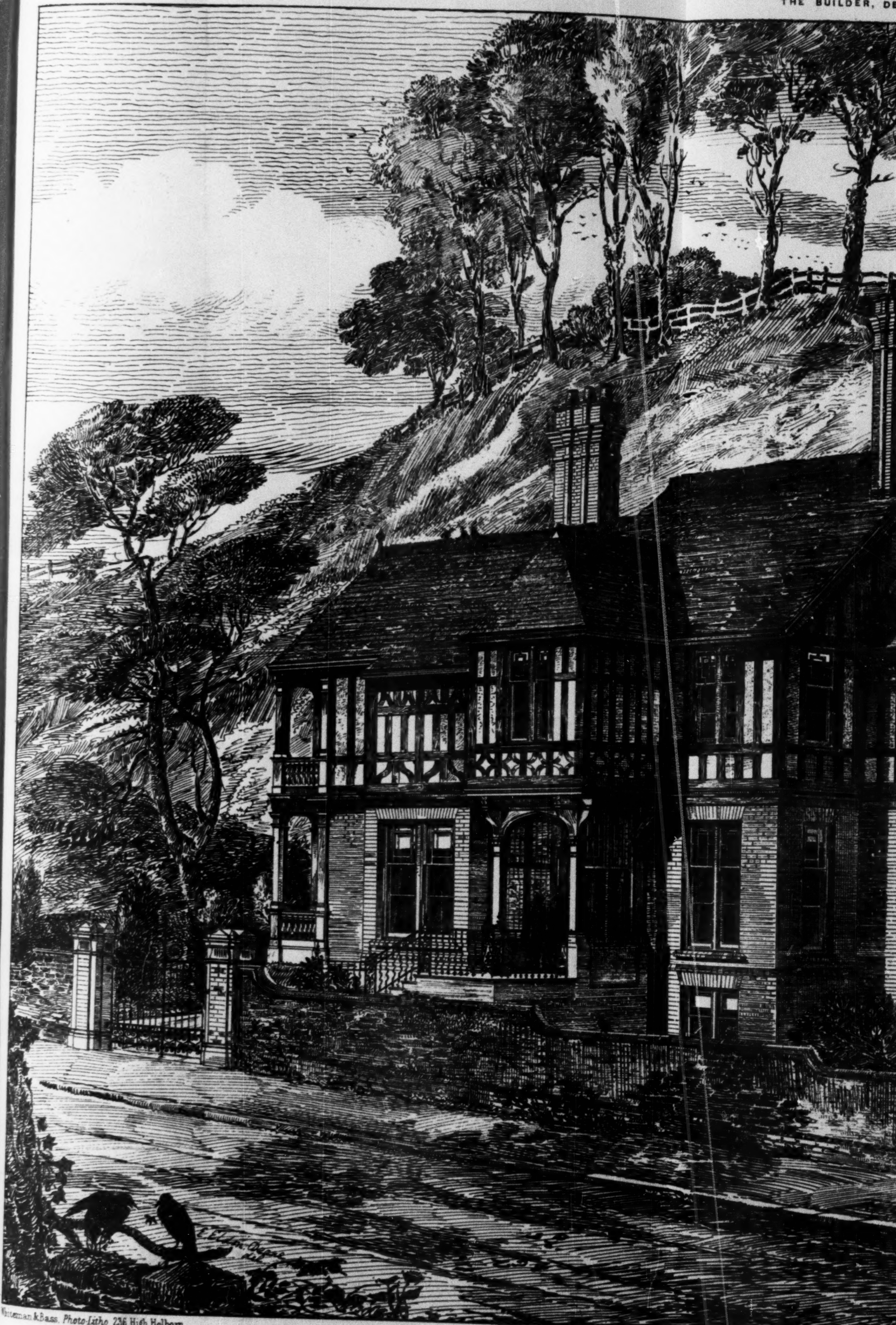

H W Brewer
A Burras Sc.

THE GREAT HALL OF THE ROYAL COURTS OF JUSTICE.—The Late Mr. G. E. Street, R.A., Architect.



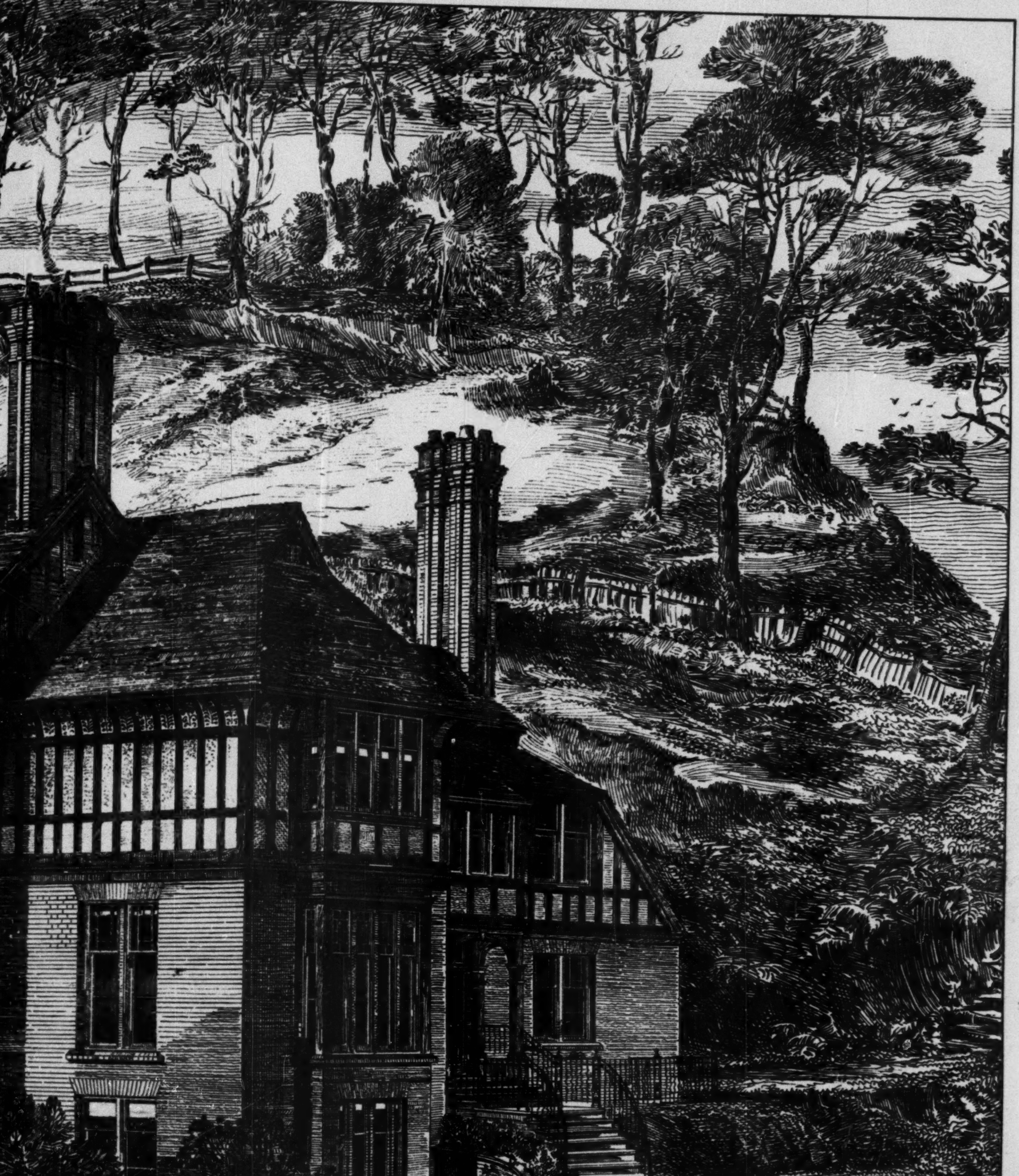

H.W. Brewer
A. Burn sc.

THE GREAT HALL OF THE ROYAL COURTS OF JUSTICE.—The Late Mr. G. E. Street, R.A., Architect.



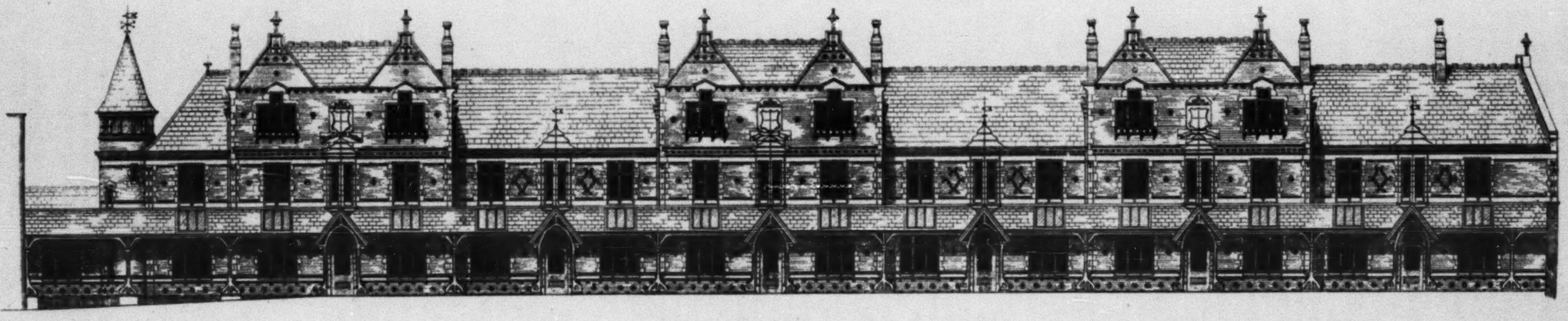
Whiteman & Bass, Photo-Litho 236, High Holborn

HOUSE AT BISHOP DOWN, TUNBRIDGE WEL



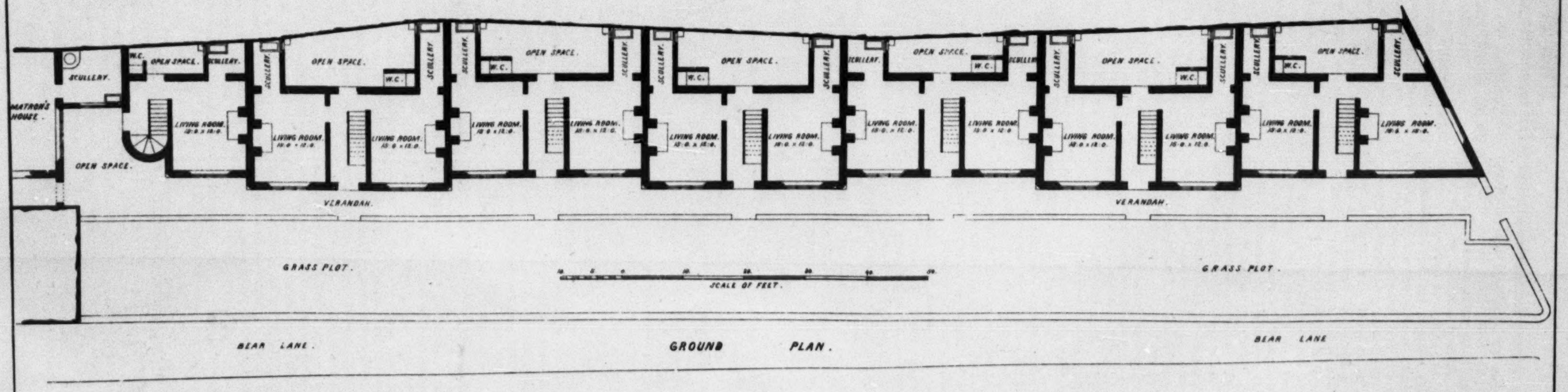
Wyman & Sons, Printers, Gt Queen St

WELLS.——MR. JAMES NEALE, F.S.A., ARCHITECT.



Dr WHITE'S ALMSHOUSES BRISTOL

J. H. Hirst
Architect
Bristol
[illegible]


MATRON'S HOUSE.
SCULLERY.
W.C.
OPEN SPACE.
SCULLERY.
OPEN SPACE.
W.C.
SCULLERY.
LIVING ROOM. 12·0 × 18·0.
LIVING ROOM. 15·0 × 12·0.
LIVING ROOM. 15·0 × 12·0.
LIVING ROOM.
OPEN SPACE.
VERANDAH.
VERANDAH.
GRASS PLOT.
GRASS PLOT.
10 5 0 10 20 30 40 50
SCALE OF FEET.
BEAR LANE.
BEAR LANE

GROUND PLAN.

Whiteman & Bass, *Photo-Litho* 236, High Holborn

Wyman & Sons, Printers, Gt Queen St

CHURCH OF ST. MARY-LE-BOW.

This church is interesting, not only as the central church of London, but more especially for its early story and for the skill shown in it by Sir Christopher Wren. The problem of the Renaissance spire has probably never been more satisfactorily solved than in this church. In its charming detail and graceful outline, it forms a perfect dream of beauty, and a study of its construction increases our admiration of the constructive skill of its designer. The sketch we give of the spire is by Mr. G. H. M. Addison.*

HOUSE AT BISHOP DOWN, TUNBRIDGE WELLS.

This house is situated on the border of the common at Tunbridge Wells, and has been erected for the residence of Mr. W. Edwards.

The lower stories are built of local red bricks. The Dunton Green bricks were used for all cut sills, arches, and ornamental work. On the upper story the timbers are combed in a dark oak colour, and the panels between are filled with pebble dash, the pebbles being collected from the sea-shore at Walmer. The half-timber work of the upper story is backed with brickwork one brick and a half thick. The roof is boarded, felted, counter-raftered, battened, and hung with local red tiles.

There was no competition, but a price was obtained from Messrs. Willicombe & Oakley, of Tunbridge Wells, to whom the contract was let for the sum of 1,520*l*. This sum was exclusive of the stoves, ranges, chimney-pieces, baths, boundary-walls, and stables. After the contract was let it was decided to raise the house, so as to secure more beautiful views of the surrounding country. This added a considerable basement story. Additional bed-rooms were also provided. These works were arranged to be paid for by measurement with a schedule of prices based on the quantities.

The house contains on the basement a parish room with a separate entrance, school-room, stores, coals, &c. On the ground-floor are drawing-room, dining-room, study, butler's pantry, kitchens, stores, water-closet, &c. On the upper floors are nine bed and dressing rooms, bath-room, water-closet, linen and housemaid's closets, and good stores.

The front side of the house facing the Common,—but not shown on our view,—has a large angle bay window, with balconies and verandahs. This arrangement was by special desire of Mr. Edwards, copied nearly in *facsimile* from a house erected at Walmer, from the design of the same architect, and illustrated in the *Builder* of December 17, 1881.

The house is nearly completed, and has been erected from the designs and under the personal superintendence of the architect, Mr. James Neale, F.S.A., of Bloomsbury-square.

DR. WHITE'S ALMSHOUSES, BRISTOL.

These almshouses, now being rebuilt from the design of the late Mr. J. H. Hirst, will accommodate thirty-two inmates, each having a combined living and sleeping room, 15 ft. by 12 ft., and 10 ft. high, with a separate scullery for each, and open yards with waterclosets at the back.

The walls are faced with Cattybrook red bricks, with courses and ornaments of Staffordshire black brick and Bath stone dressings from Corsham and Combe Down quarries. The roofs are to be covered with slates or Broseley tiles, gutters, and flashings of lead. In front, on the ground-floor level, will be a verandah from end to end forming a covered promenade in wet weather. Portions of this verandah will be of English oak, all the rest of the woodwork throughout the building being red deal. All interior woodwork to be varnished.

The aspect of all the houses is south, and the space in front will be laid with grass. The chief entrance is from Temple-street by a covered passage through the matron's house, which, being a modern structure, has not been rebuilt. There is also a carriage entrance from Temple Back.

The work is being carried out by Messrs. W. E. Walters & Son, of Bristol. The contract price being 3,250*l*.

DEVELOPMENT OF SCIENCE AND ART BY THE EXTENSION OF THE EISTEDDFOD.*

It is with considerable diffidence that I venture to solicit your attention to this paper, because I may have formed my conception of the purpose of the Eisteddfod at too great a distance, and without being fully acquainted with your views upon the subject. But it is an institution that has always deeply interested me, as it appears to be one that would admit of considerable expansion,—in fact, of being made a national instead of a local institution, such as, indeed, it was in ancient times, if the following account of it be well authenticated:—"Pliny and Tacitus bear testimony to the great knowledge which the bards brought to bear in the elucidation of the sciences of astronomy and geography; that they were masters of rhetoric and poetry, and that to learn eloquence their schools were crowded with the youth of Gaul."

To restore the Eistedfodd to its former grand proportions and wide-spread influence is the purport of my suggestions, for the time has arrived when the semblance, even, of a divided nationality should be minimised, and that as Englishmen we should appear to the world, in every sense of the expression, as members of a United Kingdom, and that the Eisteddfod should no longer be specially for the Welsh, but for us all. Your bardic traditions need in no wise be interfered with, but you yourselves, must be aware that the Principality can no longer claim the harp as exclusively its own. The harp is gradually becoming a national possession, and in no slight degree owing to the musical talents and pre-eminent mastery over that instrument of your Pencerdd Gwalia. In like manner I would desire to see the entire Queendom stimulated to high endeavour by a rightly-constituted and truly national Eisteddfod.

The foregoing introductory remarks must be my apology for appearing before you, and having tendered them, I will at once to my discourse.

One of the most important factors in the development of Grecian and of Italian artistic and literary excellence, was a consensus of judgment of a compact body of highly intellectual and cultivated men; the philosophers and their scholars in ancient Greece and the churchmen and the merchant-princes in Mediæval Italy, by whom the ideal was held up as the golden goal of human attainment, and by whom genius was taught to disregard all lesser aims. Those compact bodies of thinkers, moreover, were perfectly aware that literature and art were the most enduring monuments and true indices of a nation's intellectual status; hence the public buildings, in ancient Greece and in Mediæval Italy, became not only the shrines of religion, but of art, monumental edifices for all time. Unfortunately, however, in nations with such teeming populations as those of our own day, there is no such compact body of educated men, there is no such consensus of superior judgment, as of old time, to influence public opinion, to form the taste of the majority. Opinions are now very diverse upon most subjects, and as freedom of opinion is a primary article of the modern political creed; the aims of literature and of art are also diverse. There is no dominant influence, as there was in Greece and in Italy, tending to promote that unity of aim which is the great characteristic of the Classic and Renaissance literature and art. Unity of aim as society is at present constituted can only be looked forward to, as the outcome of a long, very long, war of contending opinions, ending in the triumph of the noblest forms of thought and of effort.

With the foregoing reflections present to my mind, it struck me that by gathering the greatest intellects of the nation to the Council of the Eisteddfod literature and art might in a short time be materially influenced by its sessional awards, and that the Eisteddfod might thus become, in relation to the general public, a substitute for that dominant and exalted intellectual guidance for want of which, in these days, literature and art diverge into all kinds of peculiarity, every one revelling in his own idiosyncracy and pursuing his own eccentric way. It may possibly be right to hold up freedom of opinion as the chief corner-stone of the political fabric, but let us, at the same time, thoroughly understand what that principle really means. And when we carefully analyse it what do we find? Why that "freedom of opinion" means nothing more than that every man shall be at liberty to think, and to assert tentatively what he thinks; for it cannot be maintained with the slightest show of reason that a man has the right to promulgate aught but the truth, aught but the right. Now, there is a certain at-one-ment or unison in all that is right, and therefore in seeking the right in all things the thoughts of a nation gradually converge towards those principles that tend to unity in purpose, to unity in work. There can, indeed, be no sound health, nothing progressive, in a nation that does not strive after that oneness of thought and purpose which centres in rectitude, that does not endeavour to shake its intellect free from the upas influences of prejudice. This is, in fact, the one only way by which a nation can attain to pre-eminence in all the higher kinds of work. We by no means wish to contend that the Eisteddfod should exclusively reward works of the highest aim. One of its functions is, as we are all well aware, that of rewarding and stimulating humble endeavour,—not as a finality, however, be it recollected, but as an incentive to more advanced attempts to higher kinds of work; but even in rewarding humble effort the position of the effort in the scale of attainment should be clearly indicated.

Although, then, this institution may stoop to reward humble effort, it should be known, as we contend, that its highest rewards should be held in reserve for the highest kinds of attainment,—not necessarily to be conferred upon the authors of any works submitted in competition, but upon the authors of any great works executed within the Queendom, and within certain limits of time. By these means a direction would be gradually given to emulation, which could not fail of having an elevating tendency on the literature and the art of the Principality,—nay, on the literature and art of the whole country. The awards of the Eisteddfod, *in excelsis*, should be for the loftiest kind of effort, in every pursuit; for such a policy would have the effect of gradually developing the institution to the importance, to the proportions, of its ancient prototype: for it was by a similar policy that the Olympian festival became so great an institution. It thus rose not only above provincial, but national prejudices. At that grand gathering every kind of talent was honoured and rewarded, every new notion was ventilated. In Greece, there was ever in her best days a spirit of noble rivalry, which made city contend with city, and citizen with citizen, in order to obtain an Olympian reputation. It was thus, too, that all national peculiarities were eliminated from the Grecian intellect and physique, and from Grecian literature and art, and that Greece became the exponent of the Ideal. It was to that free emulation, so wisely encouraged, as well as the incentives offered to the pursuit of the higher forms of attainment, that her unexampled progress as a nation may be attributed. When I say that the award of the Eisteddfod, *in excelsis*, should be for the highest kinds of success, I do not desire to lose sight of the fact, as I have already hinted, that this institution has two important functions to perform, viz. (1), that of promoting the highest aims in the Principality and the nation at large, in order to keep the true goal of human effort before the masses; and (2), that of lifting humble effort within the Principality itself. The Eisteddfod, too, should have its student's crown to be awarded to him who shall obtain the highest honours in any of the schools of the Principality during the year, or on any Welsh student who shall distinguish himself during the same period in any art or science, and anywhere in Great Britain. The certainty that excellence will be duly recognised is a great stimulus to endeavour in all the fields of intellect. These rewards should be simple and inexpensive,—a metal laurel wreath, if you will. It is an infatuation to suppose that a country may be developed to its best issues by routine and red-tape proceedings; under such a policy, a Chinese stagnation settles down upon it; it becomes effete. A great nation can only maintain her greatness by protecting, by rewarding, and by bringing talent to the front.

There is another point to which I would also direct your attention, a point in which your festival fails to follow the example of its great prototype, the Olympian, viz., in its physical contests. Why should not athletic games form a part of your programme? There is, perhaps,

---

* I send you a drawing of the spire, and will add one hereafter of the doorway.—G. H. M. A.

* From a paper by Mr. W. Cave Thomas, read at recent Eisteddfod.

CHURCH OF ST. MARY-LE-BOW.

This church is interesting, not only as the central church of London, but more especially for its early story and for the skill shown in it by Sir Christopher Wren. The problem of the Renaissance spire has probably never been more satisfactorily solved than in this church. In its charming detail and graceful outline, it forms a perfect dream of beauty, and a study of its construction increases our admiration of the constructive skill of its designer. The sketch we give of the spire is by Mr. G. H. M. Addison.*

HOUSE AT BISHOP DOWN, TUNBRIDGE WELLS.

This house is situated on the border of the common at Tunbridge Wells, and has been erected for the residence of Mr. W. Edwards.

The lower stories are built of local red bricks. The Dunton Green bricks were used for all cut sills, arches, and ornamental work. On the upper story the timbers are combed in a dark oak colour, and the panels between are filled with pebble dash, the pebbles being collected from the sea-shore at Walmer. The half-timber work of the upper story is backed with brickwork one brick and a half thick. The roof is boarded, felted, counter-raftered, battened, and hung with local red tiles.

There was no competition, but a price was obtained from Messrs. Willicombe & Oakley, of Tunbridge Wells, to whom the contract was let for the sum of 1,520*l*. This sum was exclusive of the stoves, ranges, chimney-pieces, baths, boundary-walls, and stables. After the contract was let it was decided to raise the house, so as to secure more beautiful views of the surrounding country. This added a considerable basement story. Additional bed-rooms were also provided. These works were arranged to be paid for by measurement with a schedule of prices based on the quantities.

The house contains on the basement a parish room with a separate entrance, school-room, stores, coals, &c. On the ground-floor are drawing-room, dining-room, study, butler's pantry, kitchens, stores, water-closet, &c. On the upper floors are nine bed and dressing rooms, bath-room, water-closet, linen and housemaid's closets, and good stores.

The front side of the house facing the Common,—but not shown on our view,—has a large angle bay window, with balconies and verandahs. This arrangement was by special desire of Mr. Edwards, copied nearly in *facsimile* from a house erected at Walmer, from the design of the same architect, and illustrated in the *Builder* of December 17, 1881.

The house is nearly completed, and has been erected from the designs and under the personal superintendence of the architect, Mr. James Neale, F.S.A., of Bloomsbury-square.

DR. WHITE'S ALMSHOUSES, BRISTOL.

These almshouses, now being rebuilt from the design of the late Mr. J. H. Hirst, will accommodate thirty-two inmates, each having a combined living and sleeping room, 15 ft. by 12 ft., and 10 ft. high, with a separate scullery for each, and open yards with waterclosets at the back.

The walls are faced with Cattybrook red bricks, with courses and ornaments of Staffordshire black brick and Bath stone dressings from Corsham and Combe Down quarries. The roofs are to be covered with slates or Broseley tiles, gutters, and flashings of lead. In front, on the ground-floor level, will be a verandah from end to end forming a covered promenade in wet weather. Portions of this verandah will be of English oak, all the rest of the woodwork throughout the building being red deal. All interior woodwork to be varnished.

The aspect of all the houses is south, and the space in front will be laid with grass. The chief entrance is from Temple-street by a covered passage through the matron's house, which, being a modern structure, has not been rebuilt. There is also a carriage entrance from Temple Back.

The work is being carried out by Messrs. W. E. Walters & Son, of Bristol. The contract price being 3,250*l*.

DEVELOPMENT OF SCIENCE AND ART BY THE EXTENSION OF THE EISTEDDFOD.*

It is with considerable diffidence that I venture to solicit your attention to this paper, because I may have formed my conception of the purpose of the Eisteddfod at too great a distance, and without being fully acquainted with your views upon the subject. But it is an institution that has always deeply interested me, as it appears to be one that would admit of considerable expansion,—in fact, of being made a national instead of a local institution, such as, indeed, it was in ancient times, if the following account of it be well authenticated:—"Pliny and Tacitus bear testimony to the great knowledge which the bards brought to bear in the elucidation of the sciences of astronomy and geography; that they were masters of rhetoric and poetry, and that to learn eloquence their schools were crowded with the youth of Gaul."

To restore the Eistedfodd to its former grand proportions and wide-spread influence is the purport of my suggestions, for the time has arrived when the semblance, even, of a divided nationality should be minimised, and that as Englishmen we should appear to the world, in every sense of the expression, as members of a United Kingdom, and that the Eisteddfod should no longer be specially for the Welsh, but for us all. Your bardic traditions need in no wise be interfered with, but you yourselves, must be aware that the Principality can no longer claim the harp as exclusively its own. The harp is gradually becoming a national possession, and in no slight degree owing to the musical talents and pre-eminent mastery over that instrument of your Pencerdd Gwalia. In like manner I would desire to see the entire Queendom stimulated to high endeavour by a rightly-constituted and truly national Eisteddfod.

The foregoing introductory remarks must be my apology for appearing before you, and having tendered them, I will at once to my discourse.

One of the most important factors in the development of Grecian and of Italian artistic and literary excellence, was a consensus of judgment of a compact body of highly intellectual and cultivated men; the philosophers and their scholars in ancient Greece and the churchmen and the merchant-princes in Mediæval Italy, by whom the ideal was held up as the golden goal of human attainment, and by whom genius was taught to disregard all lesser aims. Those compact bodies of thinkers, moreover, were perfectly aware that literature and art were the most enduring monuments and true indices of a nation's intellectual status; hence the public buildings, in ancient Greece and in Mediæval Italy, became not only the shrines of religion, but of art, monumental edifices for all time. Unfortunately, however, in nations with such teeming populations as those of our own day, there is no such compact body of educated men, there is no such consensus of superior judgment, as of old time, to influence public opinion, to form the taste of the majority. Opinions are now very diverse upon most subjects, and as freedom of opinion is a primary article of the modern political creed; the aims of literature and of art are also diverse. There is no dominant influence, as there was in Greece and in Italy, tending to promote that unity of aim which is the great characteristic of the Classic and Renaissance literature and art. Unity of aim as society is at present constituted can only be looked forward to, as the outcome of a long, very long, war of contending opinions, ending in the triumph of the noblest forms of thought and of effort.

With the foregoing reflections present to my mind, it struck me that by gathering the greatest intellects of the nation to the Council of the Eisteddfod literature and art might in a short time be materially influenced by its sessional awards, and that the Eisteddfod might thus become, in relation to the general public, a substitute for that dominant and exalted intellectual guidance for want of which, in these days, literature and art diverge into all kinds of peculiarity, every one revelling in his own idiosyncracy and pursuing his own eccentric way. It may possibly be right to hold up freedom of opinion as the chief corner-stone of the political fabric, but let us, at the same time, thoroughly understand what that principle really means. And when we carefully analyse it what do we find? Why that "freedom of opinion" means nothing more than that every man shall be at liberty to think, and to assert tentatively what he thinks; for it cannot be maintained with the slightest show of reason that a man has the right to promulgate aught but the truth, aught but the right. Now, there is a certain at-one-ment or unison in all that is right, and therefore in seeking the right in all things the thoughts of a nation gradually converge towards those principles that tend to unity in purpose, to unity in work. There can, indeed, be no sound health, nothing progressive, in a nation that does not strive after that oneness of thought and purpose which centres in rectitude, that does not endeavour to shake its intellect free from the upas influences of prejudice. This is, in fact, the one only way by which a nation can attain to pre-eminence in all the higher kinds of work. We by no means wish to contend that the Eisteddfod should exclusively reward works of the highest aim. One of its functions is, as we are all well aware, that of rewarding and stimulating humble endeavour,—not as a finality, however, be it recollected, but as an incentive to more advanced attempts to higher kinds of work; but even in rewarding humble effort the position of the effort in the scale of attainment should be clearly indicated.

Although, then, this institution may stoop to reward humble effort, it should be known, as we contend, that its highest rewards should be held in reserve for the highest kinds of attainment,—not necessarily to be conferred upon the authors of any works submitted in competition, but upon the authors of any great works executed within the Queendom, and within certain limits of time. By these means a direction would be gradually given to emulation, which could not fail of having an elevating tendency on the literature and the art of the Principality,—nay, on the literature and art of the whole country. The awards of the Eisteddfod, *in excelsis*, should be for the loftiest kind of effort, in every pursuit; for such a policy would have the effect of gradually developing the institution to the importance, to the proportions, of its ancient prototype: for it was by a similar policy that the Olympian festival became so great an institution. It thus rose not only above provincial, but national prejudices. At that grand gathering every kind of talent was honoured and rewarded, every new notion was ventilated. In Greece, there was ever in her best days a spirit of noble rivalry, which made city contend with city, and citizen with citizen, in order to obtain an Olympian reputation. It was thus, too, that all national peculiarities were eliminated from the Grecian intellect and physique, and from Grecian literature and art, and that Greece became the exponent of the Ideal. It was to that free emulation, so wisely encouraged, as well as the incentives offered to the pursuit of the higher forms of attainment, that her unexampled progress as a nation may be attributed. When I say that the award of the Eisteddfod, *in excelsis*, should be for the highest kinds of success, I do not desire to lose sight of the fact, as I have already hinted, that this institution has two important functions to perform, viz. (1), that of promoting the highest aims in the Principality and the nation at large, in order to keep the true goal of human effort before the masses; and (2), that of lifting humble effort within the Principality itself. The Eisteddfod, too, should have its student's crown to be awarded to him who shall obtain the highest honours in any of the schools of the Principality during the year, or on any Welsh student who shall distinguish himself during the same period in any art or science, and anywhere in Great Britain. The certainty that excellence will be duly recognised is a great stimulus to endeavour in all the fields of intellect. These rewards should be simple and inexpensive,—a metal laurel wreath, if you will. It is an infatuation to suppose that a country may be developed to its best issues by routine and red-tape proceedings; under such a policy, a Chinese stagnation settles down upon it; it becomes effete. A great nation can only maintain her greatness by protecting, by rewarding, and by bringing talent to the front.

There is another point to which I would also direct your attention, a point in which your festival fails to follow the example of its great prototype, the Olympian, viz., in its physical contests. Why should not athletic games form a part of your programme? There is, perhaps, still a certain stigma attaching to contests of physical strength, but this is so only because they have been in some degree discarded from the rule and governance of humanity. Bring them within its pale, and they would be moderated, humanised,—encouraged only to that extent that tends to the development of health and beauty. Moreover, in encouraging athletic games, within due limitations, the Eisteddfod would set an example, not only to the country at large, but to the schools and colleges of the Principality, as to the rightful extent to which physical exercises should be permitted. The physical contests at Olympia and those which occurred in the Roman arena stand out in strong contrast, exhibiting in the one case their use, and in the other their abuse and degradation. A few years since some suggestions of mine having reference to the restoration of physical contests to the session of the Eisteddfod, were printed in several of the leading papers of the principality. It may be urged that athletic games are not required by a population so extensively occupied in mechanical and laborious pursuits, but I do not suggest their introduction specially for this class; although our experience of the customs of the counties farther north would teach us that such sports do find favour with a labouring population. With this class athletic games are frequently the first step in culture. The transition from excessive muscular exercise to brain-work is neither consistent nor healthy. A constitution of the Eisteddfodd such as I propose, however, would leave it open to every man who should enter the lists of competition to exercise his own judgment, and to choose for himself that kind of complementary contest which he should deem the best calculated to effect the rounding of his own nature. No athletic exercises would be forced upon any one, but they should, nevertheless, be recognised at the session of the Eisteddfod, knowing, as most of us now well do, that they conduce to well-being, to the development of the proportion of true manhood. I may have spoken of the Eisteddfod in the plural number, but I very much question whether it is to the best interests of the Institution that more than one Grand National Eisteddfod should be sanctioned; and this great gathering should, of course, be on a scale of sufficient importance to attract competitors and visitors from all parts of the United Kingdom.

---

* I send you a drawing of the spire, and will add one hereafter of the doorway.—G. H. M. A.

* From a paper by Mr. W. Cave Thomas, read at recent Eisteddfod.

Connected with the department of athletic sports, should be your annual rifle and artillery competitions.* We are too apt, as a nation, to persist in beaten tracks, in the prejudiced belief that these must necessarily be the royal and permanent highways, and so we tenaciously cling, as a nation, to our old naval and military ways. The rifle, however, has more than any other weapon transformed the art of war, and we must promptly meet the change of tactics that it involves. Recollect, too, that the successful defence of a nation of expert marksmen is virtually guaranteed. The principality offers many opportunities for obtaining splendid rifle ranges, and there is no reason why Welshmen should not become first-rate marksmen. The building up of an institution like the Eisteddfod to its full proportions, and as I, and some of you may, in imagination, contemplate it, would require the united energies of several enthusiastic and hard-working men determined upon making it, not merely a local, but a national institution. It would, doubtless, require large pecuniary resources, too, but these would, in all probability, be readily forthcoming for a national, when they could only be obtained with difficulty, if at all, for a merely local project. To speak of the undertaking of so complete an organisation in the most matter-of-fact way, we believe that if it were carried out on the grandest scale it would pay a good interest on the capital invested. Prosaic minds may erroneously suppose that no solid advantages are likely to accrue to the State by creating incentives to excellence such as those I propose to extend and to improve. Such minds conclude that the benefits derivable from the awards of an Eisteddfod are merely of an unsubstantial and transitory kind. The benefits accruing are, doubtless, more of a moral and intellectual kind; but for every advance of this order, you may rest assured there will inevitably be a corresponding advance in the arts and sciences, and, therefore, in the power to improve the material resources of the country. Depend upon it, ladies and gentlemen, you cannot throw too much enthusiasm and energy into the establishing of your Eisteddfod in its grandest proportions, and in rendering it pre-eminently complete and fit in every respect as a centre of incentive to every kind of noble and manly endeavour; and if you desire, as I know you do, that the material production of this great country should, in all departments, culminate in the highest pitch of excellence.

The foregoing considerations lead me, by way of conclusion, to touch upon the subject of the choice of a locality for the holding of the grand National Eisteddfod. I have already expressed the opinion that you should not dissipate your power by multiplying gatherings of the kind, and to this opinion I cling. Let there be but one to be looked forward to with interest, and as the occasion for a public holiday. Let it be held, too, in a locality judiciously chosen as central, and as generally accessible as possible. I, myself, believe that the primeval Eisteddfod was an echo of the Olympian festival wafted to us by the Bardic, or priestly, traveller of the Druidic times. Moreover, I believe that, for whatever other purposes they may have been used, those interesting remains at Avebury and Stonehenge, were the permanent structures that were periodically utilised for the primitive Eisteddfod, when supplemented with temporary wooden construction and a covering of either hides or canvas. But be this as it may, I would exhort the directors of this Institution to be solicitous with regard to the choice of a locality, when they shall have fully determined to awaken the Eisteddfod to its full life, and to develop it to its grandest proportions. To me it would appear to be a matter of certainty that in the course of a few years you will be in possession of a permanent structure in which the Eisteddfod shall be held, and which shall be a monument of British aspirations as enduring as those ruder remains of the primeval national spirit.

HOW OUR PUBLIC IMPROVEMENTS ARE CARRIED OUT.*

Let us turn now to the larger and most important of the impending schemes of improvement, that for the building of new Admiralty and War Offices, the suggested block plan for which has been for some time known to architects and those specially interested in the subject, and has been published by the First Commissioner in his article in a contemporary periodical. The history of the scheme for the rebuilding of these offices affords the most striking example of the unsatisfactory and unbusiness-like working of our Government machinery in dealing with these matters. The operation has been under discussion for more than a quarter of a century. Commissioner after Commissioner has had his schemes, committee after committee has sat, talked, proposed, and done nothing; and the affair now culminates in a feeble make-shift "economy" plan, the economics of which have been rendered necessary, chiefly by the continual procrastination of any settled scheme for purchasing land and compiling the plan and design of the buildings. By far the best, finest, and most convenient site that has been proposed for the desired structures is that on the north side of Great George-street, parallel with the block of the India and Foreign Offices, and running up to Parliament-street, the present western boundary of which street, at that point, would, of course, have been set back so as to widen it, and carry out in this way a much-needed and long-promised improvement. Probably at the time when the idea was first mooted, the Great George-street site might have been acquired for half a million; now it is said to be worth more than twice that, and is to be abandoned from motives of economy, after nearly a quarter of a million has, however, been expended in a bit-by-bit tentative acquirement of property on the site, which, for any immediate purpose to which the Government can put it, seems to be now practically money thrown away. The present writer does not claim to be a financier, but it seems patent enough to any one that if there had been a permanent administration, combining the best surveying and architectural ability available, to look after these matters, instead of their being left to be the plaything of a succession of First Commissioners of Works, money and a fine architectural opportunity would have been saved. The Great George-street site would combine the public offices in one great group near the centre of Government, and would give the hint for a rebuilding of the south side also of Great George-street at no very distant date, thus furnishing a fine architectural climax to the boulevard of Birdcage-walk, and a noble approach to the Houses of Parliament from that quarter, the mean aspect of which at present contrasts sadly with the great towered building beyond.

The new scheme consists in squeezing in the new offices between the Horse Guards and Messrs. Cocks & Biddulph's bank, projecting backward over a considerable portion of Spring-gardens, in such a way that the Whitehall elevation and the Park elevations must appear almost as different buildings, and no unity of architectural effect can be realised. Here again we see the result of the utter want of continuity in what may be called building politics. Had this scheme been contemplated for any length of time, it should have been the bounden duty of some one to negotiate for the sites of the Messrs. Drummond's and Messrs. Cocks & Biddulph's banks before they were built; the existing houses between them could then have been easily acquired at no exorbitant price. But now the banks in question are built, and the cost of disestablishing them would be very great; though some of us may think that it would be worth while to pay a good deal merely to clear so poor and commonplace a building as the former off a fine site which it completely spoils. Had the whole frontage been secured, there would have been the opportunity of producing a fine mass of buildings in the new work, and of so arranging them as to run the line of the Mall through into Charing-cross, thus securing a beautiful as well as a much-needed new route.

The First Commissioner, however, tells us we need not mind that, as he can provide a road into the Mall by Drummond's Bank, with room for two carriages to pass; and, if we have a cab-route, what can we wish for more? Let architectural effect go; we need not trouble about that, for are we not going to save money? That is the whole of the argument that can be urged in favour of the new site: it is economical. Even if the banks were bought, however, and the entire site and its possibilities secured, it would not be such a desirable one as Great George-street on architectural grounds. It would involve the removal of the Old Admiralty and its adjuncts, which are really of some interest in their way, more so than anything in Great George-street (except one or two of the old houses west of Delahay-street), and the new building and the Horse Guards would materially injure each other. Far better, on architectural grounds, to group all the new office buildings together, and unquestionably better on practical grounds; and it may still appear that the wiser economy will be to purchase the Great George-street site, and note down the increased price at the present day as one of those pieces of experience for which we all have to pay heavily. One of the practical objections which is urged against the site, that the street is largely occupied by the offices of professional men who are under the necessity of being near the Houses of Parliament, may easily be dismissed. As soon as it was known that this site would be used, new and superior offices would certainly be built on every available plot in the neighbourhood; the demand in such a case is always met by a supply. It is worth note that the block-plan of the new buildings shows them arranged around quadrangles: this is one of the least sanitary principles of arranging large buildings, especially where their height must be considerable, unless the quadrangles are very large; even then the re-entering angles are apt to become receptacles of stagnant air. Wherever the buildings are ultimately erected, this should be reconsidered.*

Of other schemes that appear to be specially talked of, that of removing the houses in Abingdon-street and Old Palace-yard, opening out a view of the adjoining portion of the Abbey, and forming a new cloister for monumental erections, is an old idea of Sir C. Barry's, which was much favoured also by Sir Gilbert Scott. The throwing open of the Abbey on to what would then form a grand architectural *place* is a noble scheme, but I would prefer to see the new cloister, or "Campo Santo," on the space which has often been talked of for such purpose, the square plot of ground south of the Houses of Parliament, which is now laid out as a very forlorn-looking green, or (by courtesy) garden, with no flower-beds or any other adornments, and which no one seems to frequent. The new cloister would then group with the modern buildings, and the Abbey be left with its genuine Mediævalism undisturbed by modern imitations. The idea of adding to and raising the present façade of the National Gallery, by way of increasing the architectural dignity of Trafalgar-square, is hardly to be approved. The old façade is not, as Mr. Shaw Lefevre says, without a certain merit of its own, but it is essentially a feeble piece of architecture, and nothing really fine could be added which would blend with the existing details; the choice must remain between tolerating the existing façade or replacing it by an entirely new one.

---

* It is by no means essential that these competitions should take place in the same locality as the Eisteddfod, nor simultaneously, but somewhere, and somewhen not too remote, and with the knowledge that such gatherings were special sections of its organisation, and that successful competitors would receive their reward at the Eisteddfod. These remarks are also applicable to the athletic sports.

* From a paper by Mr. H. H. Statham, in the *Fortnightly Review*.

* In cases where a quadrangle seems the only means for securing the necessary accommodation, it might be worth while to try the effect of placing the main staircases in the angles, leaving them partially open for a through current of air. This might be made to realise a new and picturesque effect, arising out of strictly practical requirements, which is just what we want to see more of in modern architecture.

This is a very venial error, however, compared with the remarkable proposal which is seriously entertained for "treating" the Tower. The idea of that proposal is, after removing the block of storehouses which stands between the river and the Tower, and the very mean-looking building which abuts on the south wall of the keep, to rebuild the inner wall of the tower, and the lantern tower, upon their old lines, and in imitation of Mediæval work, and thus to carry out the process (of which there is only too much done already) of producing a mock-Mediæval tower,—as Edie Ochiltree would have said, "to make an antic of it." Mr. Shaw Lefevre is quite practical in his remarks as to the present utility of the Tower, and the necessity, after these unsightly buildings have been pulled down, of providing the same accommodation otherwise; and straightway he proposes to express this practical value of the Tower as a modern armory by giving it the aspect of an imitation Mediæval fortress. To rebuild it, he tells us, in any way but as a reproduction of the ancient fortress, "would be to repeat the error of those who constructed the unsightly buildings now to be removed, and could not be entertained for a moment." There seems to be a curious confusion of ideas here. The removal of the buildings referred to is, no doubt, desirable; not, however, because they are modern, but because they are bad, and badly placed. The remedy is to build better and more suitable ones; nor could there be any more interesting problem in modern architecture than to produce in such a case an addition to the Tower which would be fitted for its practical purpose, would represent the spirit of the time in which it is built, and at the same time harmonise with the massive style of the old portion of the structure. That would be a thing worth doing. But if Mr. Shaw-Lefevre really imagines that Salvin's modern-antique bastions and machicolations are looked upon with interest, or that "those who reverence and respect the past" will be impressed with a second edition of the same sort of article, he must have lived very much out of the way of recent lines of thought about art and architecture. He may be assured that with the majority of those who take an enlightened interest in the subject of architecture such a proposal would only be received with laughter, as it has already been wherever we have heard it commented upon or referred to.

The foregoing remarks are not intended to disparage the acquirements of the present First Commissioner of Works, whose capacity for dealing with architectural improvements is certainly not inferior to that of the majority of those who have preceded him in the office. It is his special misfortune to have been tempted into a much more energetic exercise of his office than most of his predecessors have thought it worth while to undertake, and to have done so under unsound official advice. The real mischief is in the system rather than in the individual. At every change of Government, the conduct of matters with which politics have no more connexion than mathematics with lyric poetry, is handed over to the hands of an official placed in his position for political reasons, who has probably given no special study either to the practical or the artistic side of architecture, and who has suddenly to assume a knowledge of the subject, and to appear as the arbiter of our architectural improvements. In one instance the choice fell on a person so notoriously destitute of any qualifications for such a post that the appointment was generally believed to have been a kind of grim joke on the part of the statesman at the head of the Government. One perfectly natural result of this is the want of any continuity of principle in dealing with public works. It is the object of each successive First Commissioner to mark his temporary reign with his own individuality, and to supersede the ideas of his predecessors. This disadvantage would be much lessened if the Parliamentary official were under the advice of a really competent permanent official; and formerly this was recognised. At one time the late Sir James Pennethorne, a very able man, was the architectural adviser to the department. At a later period, after some changes in the administration of the Office of Works, Mr. Fergusson was appointed "Inspector of Works and Buildings," in accordance with the recommendation of a Committee of Inquiry, to the effect that, "The First Commissioner requires the aid of an officer conversant in a high degree with architecture, in reference to questions connected with existing or contemplated buildings." But we have changed all that. Mr. Fergusson resigned shortly after the appointment of Mr. Ayrton as First Commissioner, not probably caring to expose himself to the amenities of that remarkable specimen of the British ædile. One or two successors followed and retired, and the present Permanent Secretary, who had been secretary in conjunction with some of the architectural officials, by a process of exhaustion of the architectural element was left apparently master of the situation. There is no wish to say anything here in the way of unnecessary comment on individual deficiencies; but this is a matter of public importance. It ought, also, to be one of public interest, and it is time that some one should say what many people know well enough, that the present permanent official has given evidence of no qualification in regard to previous training or to present knowledge of architecture, either practically or artistically, to render him a fit person to direct the architectural improvements of London, or to give advice thereupon to the Parliamentary officials, and that it is but the bare truth to say that, in any assembly of men well educated in art and architecture, his opinion on such subjects would go for absolutely nothing,—or less than nothing. As to the value he himself sets upon architectural design, Mr. Mitford has been, indeed, imprudently candid. He declared before a Parliamentary Commission that any great building that was required would be most satisfactorily carried out in the offices of the Department, as it would involve "only the engagement of a few more draughtsmen." Precisely so: and the results of that way of looking at it, where we are unlucky enough to have them, are what might be expected. The New Post-office buildings and the Bow-street Police Court are draughtsman's architecture, and the plan of the Hyde Park Corner improvement is a draughtsman's plan; and bad at that. The direction of the architectural improvement of London is, therefore, in the hands of whatever politician it may be convenient for a new Government to nominate as First Commissioner of Works, under the advice of a permanent official, who may be an excellent secretary and man of business, but to whose opinion on matters architectural no one who really understands such subjects attaches any value whatever. It remains to be seen whether educated public opinion will not demand the appointment of a permanent and specially qualified "Minister of Public Works,"—whose jurisdiction should be independent of political changes,—or at least of a permanent architectural adviser of the highest class; or whether we are to continue indefinitely a system such as would not be tolerated in any other first-class city in Europe.

St. George's Chapel, Windsor.—The work of restoration of St. George's Chapel, Windsor, which has been going on for some years, has just been completed so far as the present year is concerned. The work has been carried on by the Dean and Chapter under the direction of the Chapter surveyor, Mr. A. Nutt, and includes filling the vacant niches with the statues of Royal benefactors.

THE BURNING OF THE ALHAMBRA THEATRE.

As our readers are aware from the daily papers, the Alhambra Theatre was entirely burned out on Wednesday night, or, more correctly, Thursday morning last. Whether anything is known as to the probable or possible cause of the fire it is impossible to say at the time of writing these remarks. The fire appears to have been first perceived by the police about one o'clock in the morning, and at two the whole place was in a blaze, throwing its light far and wide over London. Regarded from the De Quincey point of view, the fire was a remarkable success, and originated some splendid effects. In St. James's Park the effect of this lurid and unwonted "northern light," with every branch and twig of the bare trees standing out in a black network against the light, was very remarkable, and a thing one would like to see painted; but this was surpassed by the effect in Trafalgar-square. Nothing could have been better arranged for a grand *coup d'œil*. Below the columns of flame and smoke lay the long dark mass of the National Gallery, all its detail lost by contrast with the glare above; while on the right Gibbs's steeple rose in a column of intense light against the black sky, glowing like molten silver; the blaze brought out other tones from the buildings on the south side of the square, and raised the whole for the moment into the region of architectural poetry. It would be worth while for any painter who may have seen it to try a picture of the effect. In Leicester-square an equally striking but more weird effect was produced by the spectacle of the burning building, the sound of the dull, heavy thuds from within as the large girders successively went down, mingled with the peculiarly unearthly noises of the steam fire-engines planted in various parts of the square. Under a canopy of smoke and sparks, which spread all over the square, hundreds of people were collected to witness the sight. A picturesque incident in the scene was the aspect of the two large turrets or minarets at the extremities of the façade, which were on fire at various points, and often in the full thick of the flames, but gave evidence of the solidity of their construction by the way they retained their position. The northern minaret settled about a foot out of the perpendicular, towards the building, and one expected to see it come down every moment; but up to the time when the fire began to subside, having burned itself out (about a quarter to three) the two turrets were still standing. The house adjoining the theatre northwards took fire, and was apparently gutted, in the upper portion at least, and at one time it looked as if there were some danger of an extended conflagration; but every effort was evidently made to keep under the flames in this house, and the fire does not appear to have spread further.

This latter point, working for the safety of adjoining buildings, is evidently regarded in such cases as the best line of tactics to employ; and no wonder, considering the utter futility of the means at hand to do anything towards keeping down the main conflagration in the case of a fire on a great scale. To see the masses of flame within the theatre, and the jets of spray playing upon them (for the column of water from the hose is broken into mere spray in its passage through the air) suggested a contrast almost ludicrous, if the occasion and the possible further consequences had not been so serious. One might as well think of putting out Pandemonium with a garden squirt. Surely it is time that some decisive effort were made to place at our command a more effective weapon against fire than the fire-engine of the day furnishes, and one of which the effects should be more proportionate to the means employed. As it is, we have in various parts of London large and handsome fire-engine houses and offices, costly engines, relays of horses, and a splendid staff of fearless and daring men; but what does all this accomplish? When there is a large fire, the fire-engines certainly arrive with great dramatic effect, careering through the streets and through crowds of people in a manner which affords a refreshing contrast to the sober everyday habits of our street traffic, and they commence snorting and belching sparks like so many demons, and floods of water are sent running down the streets; but all the result is the pumping of a few showers of broken spray into the burning building, the effect of which upon the fire is absolutely *nil;* indeed, the gases into which the water is instantly decomposed seem to replenish and strengthen the flame. It is evident to any one who looked on at the fire on Thursday morning, that our present tolerably costly fire-extinction service and *matériel* is utterly powerless to produce any effect whatever in reducing a large fire. The water was duly and regularly poured through the nozzles of the hose directed up against the windows of the burning building, but for any apparent effect produced it might as well have been poured down the street-gutter. Any means which would throw water in heavier and more solid streams might be effective, but probably we must turn to chemistry for the real solution of the problem how most quickly to reduce a great fire when it has once got fairly started.

Another consideration which naturally arises in reference to this particular fire is the emphasis which it gives to the conviction which is gaining ground, both in official and non-official quarters, of the danger from fire in theatres, and the necessity of enforcing the most stringent regulations as to construction and means of exit. Several of the more self-confident of our theatre managers (a race not deficient in that same quality of self-confidence) are talking as if they were very ill-used by the Lord Chamberlain in being expected to do so much more than formerly was expected of them in regard to fire-resisting construction and safety in the plan and arrangement of their buildings. Here is one more big theatre-fire to testify that theatres, as now constructed, are exceptionally liable to fire,—places containing many lurking-spots for fire to commence and develop unobserved, and much to feed the flame when it is once started. It is fortunate that the fire at the Alhambra did not break out until some time after the closing of the house, and that nobody's life was endangered by it. But the cause of it must have been something connected with the usual operations of the theatre; something which had commenced to burn before the house was locked up, and was left smouldering unnoticed. The same thing might have taken place at nine o'clock instead of at closing time, and then it is terrible to think what the nature of the disaster might have been. Whatever efforts managers may have been compelled to make lately to lessen the risk of fire in their buildings, the burning of the Alhambra comes in as a reminder that such risk is still one which especially attaches to theatres, and that we must proceed with improving the system of construction, plan, and supervision of theatres, until we render them as little liable to risk by fire as other buildings of public resort, which at present they certainly are not.

A WANT AT NETLEY HOSPITAL.

The attention which, during the past week, has been directed to the Royal Military Hospital, Netley, by the visit of her Majesty the Queen, renders timely a remark which for some weeks past we have been anxious to find an opportunity of making. It is one on the due observance of which it is possible that the saving of many a valuable life may hereafter depend.

Of the site, the plan, the service, the aim, and outcome of the hospital we do not now propose to speak.* It is simply to express regret that in one particular item, that of the staircases, there should be a singular and lamentable shortcoming. We speak, it is true, only from the experience of few visits paid to patients in the building; but that experience is complete so far as it goes. And if there be in any portion of the noble pile a feature for which we have failed to give it credit, it is none the less true that it has not been made in any way available in recent cases of the carriage of sick or wounded men into the establishment.

We allude to the staircases. These are rather suited to a barrack than to a hospital. They are strong and substantial, floored with that compressed and indented wood with which the stations of the Metropolitan Railway have made us familiar, and quite suitable to the use of the orderlies or male attendants on the service of the establishment.

But if regarded either as architectural features, or as means by which invalids have to walk or to be carried from floor to floor, they must be spoken of in a very different manner. They are so steep as to try the wind of any but a very hardy climber. For an invalid to walk up them would be a difficulty, and something worse. Nor are they better suited to the carriage of a patient on a stretcher. Too narrow to allow of the stretcher being carried sideways, and thus kept on the level, they enforce a very unpleasant angle on the appliance. And when, as will some times happen, and as did actually occur in a case within our own personal cognisance, the feet are carried foremost up the staircase, the strain on the patient is severe, and might not improbably prove fatal.

In a building of the grandeur of Netley Hospital,—it is, we believe, fifty yards more than a quarter of a mile long,—if erected in Italy, the Grande Scala or staircase would form not only a prominent and very striking feature of the building, but a means of access of the most admirable kind. Most admirable, that is to say, so far as relates to this mode of entrance alone. A broad flight of easy steps, as in the cases not only of the Royal Palaces of Naples and of Caserta, but even in such a building as the Palace of the Ministries at Naples, which has many features in common with an edifice like Netley Hospital, gives free access to corridors, story above story. Ascent and descent are easy to the pedestrian. And in the case of its being required to carry any one up or down, the ample width of the stairs would allow a litter or stretcher to be carried horizontally, so that the patient would not be exposed to the discomfort inflicted by a narrow stair.

But all this might have been written one, two, or three hundred years ago. Grand feature as such a staircase is, it is far inferior, as matter of convenience, of safety, and especially of comfort to an invalid, to a lift. How it is that a building of this magnitude, dating, if we remember rightly, only as far back as 1857, should be unprovided with mechanical lifts, may well be inquired. For the patients the difference would be incalculable. For the service of the house, although this is as much as possible self-contained on each floor, it would be every way preferable to steep and somewhat noisy staircases; and then, unfortunately, it is not all the patients who recover,—another obvious reason for the introduction of lifts. We beg to call the very serious attention of medical and other authorities of Netley Hospital to the strong need that exists for the introduction of mechanical lifts. Even if only one were provided at the back of the house, a branch being run from the railway to the very foot of the lift, so that with only one short transport the sufferers could be at once taken from the train that brings them to the hospital to the floor on which their wards or private rooms are situated, the gain, in cases of severe illness, would be immense. In the interest of the army, in that of humanity, in that of an establishment bearing the term "Royal," we hope that we shall not have pleaded in vain for the addition of lifts to Netley Hospital.

MODERN SANITARY LEGISLATION.

A comparison of the various legislative measures adopted by the leading civilised nations of the world for the furtherance of the cause of hygienic reform is an instructive lesson for any one interested in the cause of sanitary progress. An opportunity of this description was recently afforded by the opening paper read by Prof. Reklam, of Leipsic, at the Brunswick Hygienic Congress, in which he defined sanitary legislation as carrying out the principles which should really guide all states in the framing of laws, namely, the removal of all impediments to the corporal and mental development of individuals, thus rendering each subject as capable as possible of contributing to the general welfare. He considered the system of hygienic legislation in France as being fairly well planned but inefficiently carried out. Much the same state of things exists in Italy and Spain, though in the latter country the Medical Boards are doing good service at present. The position of sanitary matters in Belgium he considered as exhibiting a kind of compromise between the systems in operation in France and Germany. The *Conseil Central de Salubrité publique* is there the leading sanitary authority, and although not in a position to enforce its recommendations, they are voluntarily submitted to by nearly all the local authorities of the country. In Holland, each district has its sanitary council, but there is likewise in each case an inspector appointed by the Government, who acts as an intermediary between the local and national authorities. He considered the state of things in Holland as being relatively satisfactory in consequence of this system.

He attributed the increased attention given during the last forty years to sanitary matters in England to the cholera epidemics, and the consequent increase of mortality. The first law was passed in 1848, although efforts had been made since 1839 by private and public organisations to arouse the needful interest in the important question of hygienic reform. In Germany, he remarked, progress had been slower, but now an efficient system is provided by the Imperial Sanitary Administration, with its various local organisations. In some States the local medical bodies elect members to the Boards representing groups of districts, and these Boards send deputies to the head administration. In other States comparatively little progress has been made, on account of the apathy of those concerned, and Prussia is, more than any other State, open to such a charge, sanitary legislation being there in a backward condition. An improvement is, however, looked for ere long.

The American Sanitary Administration has the power of naming officials, and of issuing special injunctions. The adulteration of food has recently occupied much attention in the United States. In Switzerland there has been by popular desire an abrogation of some laws affecting sanitary matters.

The speaker considered that the fault of all modern hygienic legislation consists in the fact of its having been in most cases enacted at different times, and thus not forming a harmonious whole. Two sanitary codes have come into force, however, within the last year, which he quoted as models of what legislative enactments of this kind ought to be. In Finland, Prof. Hjelt has devised a law which meets all the requisite emergencies. In every town there is to be a sanitary commission, which consists of the chief of the police, the municipal architect, the local medical officer, and three town councillors. The whole *surveillance* of sanitary matters is in their hands. This law deals with town and country hygienic measures in a uniform manner, and provides for children's playgrounds in every town.

The regulations now in force in Servia place the authorities of that country, according to Professor Reklam's view, in the front rank of sanitary reformers, Servia being the only European country which has an independent sanitary budget. Its hygienic code has been elaborated by Dr. Gjoryjorics, and although only introduced last year, is now in practical operation. There is an annual revenue of nearly 50,000*l.* devoted to sanitary measures.

ART EXHIBITION BUILDING, ROME.

The permanent Art Exhibition Building in the Via Nazionale, Rome, is fast approaching completion, as also the temporary erection on the site of the future Via Genoa. By means of the electric light the work is carried on after dark, and the inauguration is fixed for *circa* Jan. 16. An illustrated journal, "L'Espozione delle Belle Arti," will appear in Rome on the opening of the exhibition, and will be continued while it lasts; it will then probably be published under some other title. The art editor of this journal is Sig. Foli, Piazza Nicosia 25, Rome. The approaching art exhibition is to be threefold,—Modern Art, Retrospective Art, Ancient Art. The exhibition of modern art is to comprise work done in the last decade, that of retrospective art in the epoch from Canova and Camuccini. The exhibition of ancient art will be in the Academia S. Luca. The Italian Government has voted 200,000 lire for purchases of paintings exhibited; the municipality of Rome, 50,000 lire. The royal family will also devote a large sum to purchases, and various provinces. The exhibition of ancient art is divided into ten classes: 1, architecture; 2, house and church decoration in sculpture and painting; 3, ceramic; 4, jewelry, plate, bronzes, and other metals; 5, armour and iron work; 6, intaglio and intarsio industry; 7, historical portraits and costumes; 8, tapestry, lace, embroidery; 9, Numismatic collections, &c.; 10, ancient documents, engravings, leather, and parchment. The proposal of the Municipality of

---

* The plan of this hospital was originally very bad, as we pointed out in its earliest days (if not before its erection). Since then, however, if we remember rightly, improvements have been made in this vital respect.

Rome to alter the Palace Altieri by converting the ground-floor into an arcade, thus enlarging the street, has been rejected by the State Council, and the demolition of part of the palace determined on. The Palace Torlonia is to be levelled to permit a regular square at the junction of the Corso with the Via Nazionale. The Palace Strozzi and an adjoining house will be demolished, and the Via Nazionale will then be carried from the Place de Termini to the Bridge St. Angelo, traversing the Place della Valle and Place Chiesa Nuova. The Corso is also to be carried to the foot of the Capitol, and to effect this, part of the smaller Palace of Venice and buildings beyond will be levelled.

THE RATHHAUS AT VIENNA.

The "iron man" (the *Metallarbeiter* says), which has attracted much interest in connexion with the above building, is really made of copper. The figure represents a powerful warrior clad in Mediæval copper armour. The energetic features of the countenance are seen through the open visor. The whole of the remainder of the body is covered with armour, coat of mail, &c. In the right hand is a banner about half as high again as the figure, which is itself 9 ft. in height. The statue is fixed on a pedestal, which is fastened by iron screws to the roof. These screws weigh, it is stated, over 2 cwt. each. As a further measure of precaution, an iron ball weighing nearly a ton is suspended from an iron bar which runs vertically through the pedestal.

MACHINERY AT THE SMITHFIELD CLUB SHOW.

Although there was a very large display of machinery and appliances in connexion with the eighty-fifth annual Cattle Show of the Smithfield Club, held in the Agricultural Hall this week, there were not very many exhibits which were of special and exclusive interest to the building trades. Among the exhibitors in the arcade entrance from Islington-green were Messrs. Henry Wurr & Co., of Blomfield-street, who showed a hand-feed planing-machine which will plane and true-up ready for a glue joint any piece of wood up to 12 in. wide. This is a strong and cheap machine, and likely to be highly appreciated wherever it is used. The same exhibitors show a substantial saw-bench, with a rising and falling table instead of a movable spindle. The "Ord" gas-engine, made and exhibited by this firm, appears to be a great success. It is simple in construction, and claims to be the only atmospheric gas engine fitted with a "governor." Messrs. Lewis & Lewis, of Cambridge Heath-road, were also exhibitors of some good wood-working machinery, including the "Westminster" hand-feed planer, which is well worthy of notice. They also showed a combined circular saw-bench and band-sawing machine, and the "Kensington" and other mortising machines. Messrs. Tushaw & Co. were amongst the exhibitors of wood-working machinery in the arcade, and among their exhibits was a very useful little machine for rapidly punching hoop-iron, and which is likely to be much appreciated by packing-case makers and others. Messrs. John Warner & Sons, of the Crescent Foundry, were exhibitors of pumps and other appliances for which they are noted. In St. Mary's Hall, among an odd jumble of things, we noticed some useful wood-working machinery shown by Messrs. Hempsted & Co. (late C. Powis & Co.), of London and Grantham. Among the exhibitors of steam engines may be mentioned Messrs. Aveling & Porter, of Rochester; Messrs. Barrows & Stewart, of Banbury; Messrs. Clayton & Shuttleworth, of Lincoln; Mr. Hindley, of Bourton; Messrs. Ruston & Proctor, of Lincoln; and Messrs. Ransomes, Head, & Jefferies, of Ipswich. Messrs. R. Waygood & Co., of Falmouth-road, Great Dover-street, were exhibitors of a high-pressure horizontal engine, very simple in design and exceedingly well finished. Messrs. E. R. & F. Turner, of Ipswich, made an interesting display of their specialities. Conspicuous amongst these was one of their patent automatic expansion portable steam-engines, of 8-horse-power. These expansion engines are now well known and appreciated. A 4-horse-power portable engine of the ordinary type is also shown,—a thoroughly well-constructed engine, possessing several important points of merit. The "Gippeswyk" engine appears in two of its various forms, viz., as a vertical portable engine, mounted upon iron travelling wheels, and as a horizontal fixed engine. These engines are fitted with the new Patent Turner-Hartnell Automatic Expansion Governor, a special adaptation of the Hartnell Patent Governor. The "Gippeswyk" engine is one of the best of the small-power engines now in the market. Corn mills,—another leading speciality of this firm,—are well represented, a number of mills of different sizes being shown.

ELECTION OF A DISTRICT SURVEYOR.

At the meeting of the Metropolitan Board of Works, on the 1st inst., one of the first items of business on the agenda was that relating to the appointment of district surveyor for the district of St. James and St. John, Clerkenwell, and part of Islington, rendered vacant by the death of Mr. R. L. Sibley.

There were in all thirty-five candidates who had made application for the appointment, but the voting only took place upon thirty,—five of the applicants being struck off the list,—one (Mr. H. H. Bridgman) for not being present when his name was called; a second (Mr. F. C. Notley) had withdrawn his application on the ground of ill-health; while two of the remaining three gentlemen wrote asking to be excused attendance on the ground of illness or domestic bereavement. The fifth candidate whose name was struck off (Mr. A. T. Taylor) was stated to be on a visit to America.

The following is a list of the candidates who were present, with the number of votes recorded for each in the preliminary voting :—

Name.	Age.*	Votes.
Ashbridge, A.	30	27
Brooks, C. W.	39	11
Buxton, W. J.	37	3
Carritt, E.	34	32
Cheston, H.	32	6
Edmeston, J. S.	38	19
Elkington, G., Jun	31	20
Ferguson, J. M.	37	5
Grellier, W.	35	7
Hamilton J.	38	4
Hunter, P.	31	22
Inskip, G.	34	1
Jackson, G.	34	5
Karslake, L.	38	10
Lean, G. A.	36	7
Lees, W. H.	39	18
McLachlan, H.	30	13
Marsland, E.	29	17
Mundy, T. E.	38	7
Pownall, R. E.	34	9
Renton, O.	34	2
Scrymgour, W. H.	30	18
Solomon, L.	34	5
Spiers, W. L.	34	10
Stenning, A. R.	37	22
Stevens, W. H.	39	17
Stock, H. W.	31	1
Street, E.	34	18
Tanner, A. W.	39	29
Todd, F.	48	17

The six candidates who received the highest number of votes in this preliminary voting were Messrs. Ashbridge, Carritt, Elkington, Hunter, Stenning, and Tanner. The subsequent voting was as follows :—

	Second Vote.	Third Vote.	Fourth Vote.	Fifth Vote.	Final Vote.
Ashbridge	14	—	—	—	—
Carritt	29	27	25	27	23
Elkington	17	13	—	—	—
Hunter	17	16	13	—	—
Stenning	21	20	18	15	—
Tanner	22	23	20	23	15

Mr. Carritt was, therefore, the successful candidate, and he was accordingly appointed to the office, subject to the usual conditions.

THE USE OF CEMENT IN THE CONSTRUCTION OF SEWERS.

In commenting upon the recent utterances of various sanitary engineers on this question, the *Thonindustrie Zeitung* states that recent examinations made at Frankfürt showed that the cement, mortar, and the concrete used (nearly four years ago) in the construction of the system of drainage have completely withstood all influences to which they have been exposed, and as they get older become harder. In the case of surfaces of concrete their hardness and smoothness have been fully maintained, and in no place could any trace be discovered tending to show that they had been affected by the sewer-water. An inspection made at Hamburg has resulted in an equally satisfactory manner.

BUILDING PATENT RECORD.*

APPLICATIONS FOR LETTERS PATENT.

5,598. F. Greatrex, Uxbridge. Stoves and fireplaces. Nov. 24, 1882.

5,636. T. Carter, Bideford. Preventing the flow of sewer gas into buildings. Nov. 27, 1882.

5,680. H. Doulton, London. Construction of the steps of flights of stairs. Nov. 29, 1882.

5,685. F. Smith, London. Bricks. Nov. 29, 1882.

5,704. H. J. Allison, London. Artificial stone for veneers, &c. (Com. by W. Matt and M. Meterbach, New York, U.S.A.) Nov. 30, 1882.

5,708. P. Jensen, London. Manufacture of furniture, doors, window-sashes, &c., from peat moss. (Com. by T. P. Aktiebolag, Jönköping, Sweden.) Nov. 30, 1882.

NOTICES TO PROCEED

have been given by the following applicants on the dates named :—

Nov. 28, 1882.

3,487. E. Edwards, London. Apparatus for maintaining a constant draught in chimneys. (Com. by A. Marques, Bordeaux.) July 22, 1882.

4,850. W. Teague, Illogan. Apparatus for ventilating purposes. Oct. 12, 1882.

5,125. A. J. Boult, London. Door checks or governors. (Com. by the Elliott Pneumatic Door Check Company, Boston, U.S.A.) Oct. 27, 1882.

Dec. 1, 1882.

3,554. J. L. Thomasson, Worcester. Ventilators. July 26, 1882.

3,565. H. Morris, Manchester. Apparatus for adjusting ventilators. July 27, 1882.

3,613. A. C. Henderson, London. Stoves for heating by hot air and water. (Com. by Besson & Co, Paris.) July 31, 1882.

3,816. H. J. Haddan, London. Stoves. (Com. by D. McB. Graham, Massachusetts, U.S.A.) Aug. 10, 1882.

ABRIDGMENTS OF SPECIFICATIONS

Published during the Week ending December 2, 1882.

1,740. A. Browne, London. Stove. (Com. by L. Bregha, Dresden.) April 12, 1882. Price 6d.

This consists of three cylindrical chambers, one within the other. From the fire beneath, the gases of combustion rise into the innermost cylinder, thence pass down the inner annular space, and rise again through the outer annular space, whence they pass to the flue. The air is led through pipes through these spaces to be warmed.

1873. H. Fokes, London. Apparatus for sweeping chimneys and flues. April 19, 1882. Price 2d.

At the top of the chimney is a pulley, round which passes a chain, to which the brush for sweeping is attached. (*Pro. Pro.*)

1890. F. Kingston, London. Eye for holding stair-carpet and other rods. April 20, 1882. Price 4d.

This eye has two limbs, which terminate in chisel edges, by which the eye is secured in its place.

1,902. W. Selby, Manchester. Ash-guards. April 21, 1882. Price 4d.

These consist of a hinged perforated shelf, with ledges which form a toast-stand, a toaster, and a smoothing-iron heater.

1,916. T. A. Riggs, Aldeburgh. Combination of substances for the manufacture of bricks, &c. April 22, 1882. Price 4d.

The chief material is "coralline craig," which is mixed with cement or lime, and made into the required form.

1,974. John Henson, Derby. Barns and shelters with rising and falling roof. April 26, 1882. Price 8d.

The roofs are supported by chains led over pulleys on the top of uprights, and are raised or lowered by a worm and worm-wheel, which actuates all the chains at the same time.

1,975. T. E. Bladon, Birmingham. Ventilating and chimney cowls. April 26, 1882. Price 6d.

These consist of two concentric tubes, on the axis of which are two sets of vanes inclined in opposite directions. As the air enters it passes through one of these sets of vanes down the annular space between the tubes, while the vitiated air escapes through the inner tube past the other set of vanes.

1,979. J. Beresford, Birmingham. Urinals. April 26, 1882. Price 8d.

The basins are secured on horizontal pivots, so that they can be folded up, and a small tank is arranged above, so connected with the pivot that the water is shut off when the basin is lifted, and the tank is allowed to fill, and when the basin is lowered for use the water in the tank flushes the basin.

---

* The limit of age fixed by the Board is between twenty-eight and fifty years.

* Compiled by Hart & Co., Patent Agents, 186, Fleet-street.

2,006. W. Willshaw, Lenton. Ventilating greenhouses, &c. April 28, 1882. Price 2d.

The air-admitting orifices have pipes, which lead the air to a trough surrounding a portion of the heating-pipe, whence the air may pass into the greenhouse warmed. (*Pro. Pro.*)

2,022. J. H. Welch, Birmingham, and B. W. Spittle, Wednesbury. Attaching door-knobs to spindles. April 28, 1882. Price 2d.

A steel tongue is placed inside the mount of the knob, to bite the corner of the spindle. (*Pro. Pro*)

2,216. T. C. Summers, Portsea. Supplying water to water-closets. May 11, 1882. Price 6d.

The seat is connected with a double-action closing piston. When the front end of the seat is depressed the tank is allowed to fill, the exit from the tank being cut off, and when it is again raised the flush issues from the tank, shutting off the supply.

4,039. W. R. Lake, London. Impregnating mineral substances or compounds with bituminous products. (Com. by R. Michelet and L. Tescher, Berlin.) Aug. 23, 1882. Price 6d.

The stones, bricks, &c., are subjected to the action of intense heat, vacuum, and pressure, in a receptacle to which the bituminous substances are introduced with which they are impregnated.

HARD GLASS.

One of the leading organs of the German glass trade has recently called attention to the fact that, under certain conditions, the description of glass known as hard glass is liable to fracture, and in some cases is even more easily destroyed than ordinary glass. Cases occur in which glass vessels composed of it break without apparent reason, the cause being probably that the process of cooling has been too rapid, or that it has been partial and unequal in its operation, with the result of some parts of the glass being of different elasticity from others.

The invention of De la Bastie (by which glass heated to a softening point was plunged into oil, grease, wax, resinous, or bituminous substances, and subjected to a rapid process of cooling until a certain degree of temperature was attained, from which point the process was conducted at a slower rate), attracted, at the time of its being made public, a degree of attention in excess of its merits as proved by actual experience. It is no detraction, however, from the approved and tried value of this process, to record that the expectations formed of its practical value were, in many cases, of an exaggerated nature. Thus it has been stated that its resisting power was fifty to eighty times that of ordinary glass. The fact is noted that sheets of hard glass can bear the strain of weights falling on them, and can also bear the shock of being thrown down from a height. At the same time, they are easily broken, it is stated, if in their fall they come upon a piece of gravel, which cracks the glass. When hard glass breaks, it usually does so with a certain degree of violence, and falls into a number of small, sharp-edged fragments. In this respect it is not dissimilar to certain kinds of Venetian glass.

The cutting of hard glass can usually only be effected in one manner, namely, in a parallel line to the sides, this circumstance being connected, it is said, with certain facts in relation to optical science.

ST. PETER'S CHURCH, LEICESTER.

The decoration of the chancel of this church is now completed, and presents a harmonious effect. The lower part of the apse is painted in a chocolate colour, with ornamental bands running across it, and the sacred Greek monograms A and O in gold; from the moulding at the top of this dado to the string-course running round the windows a greyish-green prevails, and is powdered with conventional lilies and roses, with a rich chocolate band of pomegranates at the upper part. The spandrils over the arches of the windows are filled with a conventional treatment of the vine in a brownish red, on a vellum-coloured ground, the grapes being in gold. There are also shapes containing sacred monograms on coloured grounds, and each window is surmounted by an ornate cross, the reveals being painted a warm salmon colour. The cornice running round the whole of the chancel is ornamented in gold and colours in broad leading lines. The wooden roof of the sacrarium is divided into sixteen large panels in two rows, each panel being filled with an angel clothed in white, with coloured wings and gold nimbi. The upper row are playing on musical instruments; the lower holding a scroll, with the text, "The Lord is in His Holy Temple, let the earth keep silence before Him." The two angels immediately over the altar are kneeling in adoration. At the apex where the ribs meet, the panels contain broad gold rays radiating downwards; the ribs are treated with chevrons of gold and red; some of the lesser mouldings are also coloured. The whole composition has been designed and executed by Messrs. Cox, Sons, Buckley, & Co., of Southampton-street, Strand, London, who are also painting the panels for the new reredos, which is being made by a townsman, Mr. Noble, after the designs of Mr. Turner, architect.

PROVINCIAL NEWS.

Reading.—The new block of buildings to be known as the "British Workman," in Abbey-street, Reading, was opened on the 23rd ult. The old premises, which were erected in 1872, were found to be not sufficiently large for the present requirements, the house being very largely patronised by working men and country people visiting Reading, and, by the liberality of Mr. Alfred Sutton, the new premises have been built at his sole cost. The old coffee-room has been transformed into a bar where tea, coffee, and other non-intoxicants will be sold, and adjacent is a spacious dining-room 36 ft. long and 18 ft. wide, fitted with marble-top tables and comfortable benches, and affording accommodation for about seventy persons at a time. On this floor also are scullery and kitchen, with all modern appliances, and in the latter room is a lift communicating with the first floor. The club-room, which is on the first-floor, will seat a large number of persons. In addition to the supply of refreshments, ample accommodation is provided for working men and others of limited means to lodge or live, there being on the first and top floors about twenty bed-rooms neatly furnished for single working men. In the basement of the building are spacious stores, larder, &c. The contractor was Mr. J. Bottrill, King's-road, and Messrs. Brown & Albury were the architects. On the occasion of the opening of the building Mr. Alfred Sutton invited the whole of the workmen employed in the construction of the building (numbering between seventy and eighty) to a substantial dinner. The total cost of the building has been about 3,000*l.*

Tunstall.—We learn from the *Staffordshire Advertiser* that the Tunstall Board of Health is endeavouring to retrieve the mistake it made many years ago in erecting a market wholly out of character with the needs of the town, and which has been a "white elephant" ever since. It is proposed to convert a third of the dismal waste into a structure which will supply the town with the public offices of which it is so much in want, and if the estimates of the surveyor are reliable, not only can this improvement be effected without adding to the rates, but the rearrangement of the market and the additional buildings will bring in a revenue which will go a good way towards paying the interest on the outlay. Captain Hildyard, R.E., has held an inquiry in reference to the matter, the Local Board having applied for a loan of 12,000*l.* for the purpose of effecting the improvement. Among the witnesses examined in support of the scheme was Mr. Wood, the surveyor to the Board, who explained his plans, and said that the present area of the market was 7,226 square yards, and the intended area would be 4,920 square yards. The present number of stalls was 130, besides 60 yards of tables. The altered market would contain 94 stalls, and tables of the length of 54 yards. The cost of re-arranging the market would be 1,450*l.* In the new erections (in front of the market) there would be a board-room, offices for the officers of the board and the relieving officer, and a committee-room. The inspector said he could not help thinking that Mr. Wood's estimate would be exceeded. Mr. Dutton said the Board had determined to keep within the 12,000*l.*, and if the tenders exceeded the estimate the plans would have to be amended.

Birmingham.—The Birmingham Council has been occupied in considering the draft of the new Birmingham Corporation Bill for consolidating and amending the various Acts and Parliamentary Orders affecting the powers of the Corporation. These powers relate to sanitary matters, the regulation and control of the parks, municipal buildings, free libraries, and other property of the Corporation, the by-laws affecting porters and drovers, hackney carriages, and marine-store dealers, the police regulations, the sale of coal, the duties of the fire-brigade, and the prevention of fires, the employment of children in factories and workshops, the conduct of the gas and water departments, the Closed Burial Grounds Act, and the finances of the borough, together with a number of miscellaneous regulations and provisions.

EDUCATION OF ENGINEERS.

Sir,—In your article in last week's *Builder* on "The Education of Engineers," you remark, "Shall the Institution of Civil Engineers remain an educating body when it becomes an examining body?" Those who favour the present movement are disposed to answer this question in the negative, and they suggest that the large number of students now under the *ægis* of the Institution should be transferred to one of the junior engineering societies."

This is not the view taken by the Council of the Society of Engineers, for they aim at strictly educational work in their coming lectures, which is a totally different thing from the work now done by the Institution with their students.

As a matter of fact, the Council carefully avoided appointing Tuesday and Friday evenings, so as in no way to clash with the ordinary meetings of the Institution on Tuesdays, or their students' meetings on Fridays.

Jabez Church, M.Inst.C.E.,
President, Soc. Eng.

DAMP WALLS.

Sir,—We have read with much interest the article in your last issue on this subject, reproduced from the *Badische Gewerbe Zeitung*. It is quite evident that Professor Meidinger has thoroughly investigated the matter as to the different causes from which damp walls are produced.

Of the remedies recommended by him that contained in paragraph *c* is undoubtedly the most effectual, but it is absolutely necessary that the walls, after being thoroughly dried by stoves, should be kept heated during the application of the waterproofing liquid, and also that it be driven into the bricks or stones with the heated stoves until they become thoroughly saturated. It will take from six to twelve applications of the liquid to do this, one coat being quite useless, as we have found from experience.

Tinfoil and pitch paper have been in use for some years, but in nearly all cases failed after the lapse of a few months, when the damp from the walls causes it to come away from them, bringing the paperhanging with it.

A. Dreyfus & Co.

REMOVAL OF SNOW.

Sir,—About ten weeks ago the Commissioners of Sewers invited sketches and ideas for the removal of snow from the area of the City. As one of the competitors, will you kindly allow me, through the medium of your columns, to ask these gentlemen what decision they have arrived at, and when that decision will be made known? Patience.

COSTS OF PAVING THOROUGHFARES.

At Marylebone, the owners of five houses at Dartmouth Park-hill were summoned by the Vestry of St. Pancras for their part of the estimated expenses of providing and laying the paving on the west side of that thoroughfare. Mr. Besley supported the summons, Mr. Rotton and Mr. Lyon defended. The boundary of the parishes of St. Pancras and Islington ran down the centre of the road, and, by an order of the Metropolitan Board of Works, the upper part of the thoroughfare was vested in Islington for paving and sewage works, and the lower end in St. Pancras. Islington had been unable to recover paving demands for houses on the western or St. Pancras side of the road, although it was a portion of the thoroughfare vested in Islington. St. Pancras parish then took these proceedings.

Mr. Cooke held that a vestry could not apportion on houses in one part only of a road, but must do it on both sides of the road. One parish also could not apportion on houses in another parish. There was here a perfectly good order vesting the whole of that portion of the street in the Islington vestry, and the demands made by St. Pancras were illegal, and could not be sustained. The summonses would be dismissed, with twenty-six guineas costs against the vestry.

OBITUARY.

Miss Rhoda Garrett.—The death is announced of Miss Rhoda Garrett, at the age of forty-one. The daughter of a country clergyman of small means, and one of a large family, she broke through the usual restrictions of home life and determined to earn for herself an honest independence. After passing through an architect's office, she set up for herself as a "house decorator," taking a cousin, the sister of Mrs. Garrett Anderson and Mrs. Henry Fawcett, into partnership, and, in spite of delicate health, soon attained a good position. Her taste and sense of fitness soon recommended her to a large and admiring circle.

DISSENTING CHURCH-BUILDING NEWS.

Clapham. — The new Baptist Chapel in Grafton-square, Clapham, was opened on Tuesday, December 5. It has been erected of picked stock facings, with Portland stone dressings and red-brick quoins, &c. It will hold 850 persons seated in the area and capacious galleries. There are schoolrooms in rear to accommodate on first and second floors about 500 children. The usual vestries and other offices are provided on the ground-floor. The amount of the contract was 5,572*l.*, exclusive of heating, which is on Grundy's hot-air principle, and appears to act well. The architect is Mr. W. Niven, Dean's-yard, Westminster, Mr. F. Higgs, of Loughborough Junction, being the builder, and Mr. C. Hunt, the foreman of works.

Richmond, Yorks. — A new Congregational church is to be built at Richmond, Yorkshire, from designs by Messrs. Clark & Moscrop, architects, Feethams, Darlington.

STAINED GLASS.

Salisbury.—Wilton Church has just received an addition in the shape of a memorial stained-glass window, the gift of Dr. Bennett, a local physician, to the memory of his wife. In the treatment of the window the greatest importance has been given to the central subject, illustrating the "Resurrection," which was, at the request of the donor, treated after a painting by Giotto. Surrounding this is a subject showing the three Marys at the tomb. The subject chosen to form the base of the window is "Our Saviour meeting Mary 'on the third day' in the Garden." These subjects are divided by a frame-work of grisaille ornament. The window has been executed by Messrs. J. A. Gibbs & Howard, Charlotte-street, Fitzroy-square.

Chewton Mendip.—Two stained-glass windows, as memorials to the late Mr. E. B. Hippisley and members of his family, have been recently placed on the south side of Chewton Mendip Church. The designs consist of canopy work in accordance with the architecture of the stonework, and in the panels are the following subjects, illustrating the parables of our Lord:—"The Unmerciful Servant," "The Labourers in the Vineyard," "The Talents," "The Good Samaritan," "The Lost Sheep," and "The Prodigal Son." In the tracery are angels bearing inscribed scrolls. The work has been designed and carried out by Messrs. Joseph Bell & Sons, of College-green.

Piddinghoe.—Several of the windows of the recently-restored parish church of Piddinghoe, Sussex, have been filled with stained glass, the gift of parishioners and friends. The three lancets at the east end of the chancel represent in the centre the Crucifixion, with St. Mary and St. John on either side. These windows are the gift of Mr. R. H. Faulconer, of Lewes, and were executed by Messrs. Powell, Whitefriars, London. All the other windows are by Messrs. Wailes & Strang, of Newcastle-on-Tyne. The windows in the baptistery represent Christ blessing little children, and his own baptism. The windows of the south aisle are occupied by representations of the twelve Apostles, and one in the north aisle represents the Eastern Kings bringing offerings to the Saviour, which is in memory of Mr. Hugh, who died in 1866. Another shows Simon blessing the infant Saviour, and is to the memory of Mr. Winton Croft, who died in 1862. The third window in this aisle is to the memory of James and William Tompsett, and in the north aisle in the chancel is a stained window to the memory of William Purnell, who died in 1879. The east window of the north aisle represents the "Ascension," and is erected to the memory of "Joseph and Mary Tompsett." One of the windows in the south aisle portrays the Resurrection, and has been put in as a memorial of Francis Tompsett.

SCHOOL-BUILDING NEWS.

Lynn, Norfolk.—The foundation-stone for the new Wesleyan schools has been laid. When completed, the schools will consist of entrance-hall, on either side of which are two large schoolrooms, communicating with the lecture-hall, 60 ft. by 40 ft., and 25 ft. high, adjoining which are six class-rooms and the library; there will be also a retiring-room, with lavatory and water-closets. The kitchens and other offices are detached. The buildings are designed in the Perpendicular style, with Bracknell red facing-bricks for the front, and Lascelles's concrete dressings to the windows and doors; the roof will be covered with slates. Mr. W. H. Brown, of Lynn, is the contractor, Mr. Hillam being the clerk of the works. Mr. Hatchard Smith, 41, Moorgate Station-buildings, is the architect.

Miscellanea.

Conviction for Abusive Language to a Local Board Official.—Before the Stipendiary, Mr. J. R. Phillips, West Ham, William Simpson, described as a builder, of Graydon-villa, Forest-gate, appeared in answer to a summons charging him with using abusive and insulting language towards Edmund Henry Raiman, on the 20th of November. After hearing the witnesses for the defence, his Worship said that it was impossible for him to come to any other conclusion than that the case was made out against him. It was perfectly clear that Mr. Simpson not only did use the language imputed to him to Mr. Raiman himself, but also to a strange boy. He could not understand how a person of the defendant's apparent education and status could so demean and disgrace himself in that way. He would have to pay a fine of 2*l.* and costs, in all 3*l.* 11s.

Presentation.—Mr. Reuben Cull, London representative to Messrs. John Knowles & Co., of Euston-road and Burton-on-Trent, having decided to retire from that position, the staff and workmen met and entertained him at the Wrotham Arms, Camden Town, a few days ago, and amid unanimous expressions of respect and sincere regret at his resignation, presented him with a liqueur-case, suitably inscribed. Messrs. Knowles & Co. have issued a circular to their customers, in which they point out that Mr. Cull's retirement is his own decision, after having filled his position faithfully and honourably for twenty years. Mr. Cull retires to the Ketley Blue Brick Works, in which he is a partner, and in his new sphere of action we wish him all prosperity.

Architectural Exhibition, Edinburgh.—Particulars of this exhibition were given by us a fortnight ago. Works intended for exhibition will be received at the Royal Academy National Galleries on Wednesday and Thursday next, Dec. 13 and 14. All communications connected with the exhibition to be addressed to Mr. Alfred Bryson, acting secretary, 39, Frederick-street, Edinburgh.

Mr. and Mrs. German Reed's Entertainment.—On Wednesday next, December 13, Messrs. Reed & Grain will produce their Christmas programme, comprising a new first piece, by Arthur Law, music by King Hall, entitled "A Strange Host; or, a Happy New Year"; and a new second piece, by Gilbert A'Beckett, music by Corney Grain, entitled "That Dreadful Boy." Mr. Corney Grain's musical sketch "En Route," will still be retained in the programme.

Burgos Cathedral.—We are asked to mention, with reference to the recent competition here, that the firm who has been selected by the Royal Academy of Madrid to provide stained glass for the six large windows in the chancel is Messrs. Mayer & Co., of Munich and London.

Leatherhead Drainage.—Eighteen sets of plans were sent in for this work in reply to the advertisement of the Rural Sanitary Authority of Epsom Union. The first premium has been awarded to Messrs. Gotto & Beesley, of Westminster. The plans were referred to Mr. Baldwin Latham, C.E.

The Strength of Boiler Flues.—At a meeting of the Society of Engineers, held on Monday, December 4th, in the Society's Hall, Victoria-street, Westminster, Mr. Jabez Church, president, in the chair, a paper was read by Mr. W. Martin on the "Strength of Boiler Flues." In the construction of steam boilers, more than in ordinary engineering matters, it is of special importance, both to the engineer and the public, that the principles involved should be clearly established, since cases of failure produce such disastrous results, which, now that steam power is so universally used, may affect the safety of the public at large. In most cases, where a boiler fails simply from inherent weakness, it is usually from the collapse of its flue, since the flue of a Cornish or Lancashire boiler is, unless specially strengthened, the weakest part of the boiler. Besides being essentially weaker, the flue is the part which, more than any other, is injuriously affected by faulty construction. This, in conjunction with the consideration that, unless dangerous or almost collapsing pressures are applied, it is extremely difficult to discover their weakness by testing, makes the construction of boiler flues a matter of particular importance. Notwithstanding the interesting character of the problem, and its importance, however, the experimental data upon which our knowledge rests is insufficient and unsatisfactory. The only systematic series of experiments which have been made at all were made by Sir William Fairbairn twenty-four years ago, and the formula deduced by him from these experiments is still the one in use by engineers. The reliability of this formula is not, however, beyond question, and its application to different cases can be made to produce somewhat anomalous results. It is much to be desired that this subject could receive a new experimental investigation, and in such a case, the experiment should be with objects corresponding in shape, and conditions of strain, though not necessarily in size, to actual flues.

Railway Hotel, Liverpool.—The Lancashire and Yorkshire Railway Company have instructed Mr. Henry Shelmerdine, of Liverpool, to carry out their intended hotel and station buildings at the new terminus, Tithebarn-street, Liverpool, which are estimated to cost upwards of 100,000*l.* He has lately carried out several extensive erections, including new *Daily Post* offices, Imperial Chambers, Henstock's Buildings, Castle-street, and several buildings in other parts of that city.

Portishead Railway.—Arrangements have been made for doubling a portion of the Portishead Railway, between the junction with the main line and Clifton Bridge Station. The tender by Messrs. J. Durnford & Son, contractors, has been accepted. Mr. F. C. Stileman, of Westminster, is the engineer.

The Courts of Justice.—The *Citizen* has issued a large and clear plan of the principal floor of the Royal Courts of Justice. It will be found useful to hang up in offices.

TENDERS

For the erection of school-rooms, class-rooms, and gallery, and reseating of ground floor, at the Baptist Chapel, Queen-street, Ilkeston, Derbyshire. Mr. R. Argile, architect, Ripley and Derby. Quantities supplied:—

Noon & Wood, Marston	£1,250	0	0
Holbrook, Ilkeston	1,172	0	0
Ford & Co., Derby	1,120	0	0
Shaw, Ilkeston	1,115	0	0
Clark, Ripley*	1,000	0	0

* Accepted, subject to modifications.

Accepted, for pulling down and re-erecting three houses at Charlestown, Halifax, for Mr. Thos. Townsend. Messrs Leeming & Leeming, architects, Halifax:—

Fearnley & Firth (mason).
W. Macdonald (joiner).
A. S. Blackburn (plasterer and slater).
Akroyd & Mills (plumbers & glaziers).

Accepted, for tailors' workshops and woolshops, Halifax, for Mr. Jubal Riley. Messrs. Leeming & Leeming, architects:—

Scott & Co. (masons).
Noble & Son (joiners).
A. Hobson (plasterer and slater).
J. Thompson (plumber and glazier).

For works in connexion with building new infants' school, boundary-walls, &c., at Upper Stratton, Swindon, for the Stratton St. Margaret School Board. Mr. William Drew, architect, Swindon:—

Wallis	£738	0	0
Barrett	679	0	0
Henley	659	15	0
Wiltshire	659	12	0
Jackson	649	0	0
Phillips & Powell	648	10	0
Looker (accepted)	625	0	0

For additional block of buildings, receiving wards, &c., at the workhouse, Sydney-road, Homerton, for the Guardians of the Hackney Union. Messrs. Lee & Smith, architects :—

Stevens & Baker	£37,750	0	0
Hart	37,286	0	0
Gentry	36,974	0	0
Paramor, Margate	36,785	0	0
Howell & Son	36,550	0	0
Morter	36,475	0	0
Crockett	36,398	0	0
Johnson	36,347	0	0
Boyce	35,700	0	0
Longley	35,541	0	0
Perry & Co.	35,260	0	0
Kellett & Bentley	35,184	0	0
Nightingale	35,180	0	0
Macgregor	35,115	0	0
Ewins & Co.	33,900	0	0
Wood, Chelmsford	33,720	0	0
Croaker	33,411	0	0
Merritt & Ashby	33,111	0	0
W. Shurmur (accepted)	32,877	0	0
Capsey	32,522	0	0

For town-hall and cellarage, Eastbourne. Mr. E. F. W. C. Schmidt, architect (building surveyor), Eastbourne :—

Huggett & Coster	£17,390	0	0
E. Cornwell	17,180	0	0
Redford & Potter	16,946	0	0
W. Hook	16,280	0	0
C. Tomkinson	15,637	0	0
James Harper	15,540	0	0
James Longley	15,495	0	0
James Peerless	15,410	0	0
William Jones	15,370	0	0
R. Climpson	15,200	0	0
J. A. Skinner	15,122	0	0
W. Gregar	15,118	0	0
Booth & Sons	15,000	0	0
Smith & Son	14,814	0	0
M. Wells & Co.	14,800	0	0
Priestley & Gurney	14,780	0	0
Deacon & Co.	14,774	0	0
Alfred Dore (accepted)	14,481	16	0
P. Peters	14,476	0	0
Grimwood & Sons	14,444	0	0
A. Matthews	13,676	4	4

For extension of the Adelaide Café, 436, Strand, and 11, King-street. Mr. Spencer Chadwick, architect :—

Lawrence	£6,850	0	0
Bywaters	6,475	0	0
Clements	6,345	0	0
Oliver	6,225	0	0
Howard & Dorrell	6,187	0	0
Garrard	6,121	0	0
Patrick	5,925	0	0
Langmead & Way (accepted)	5,680	0	0

For the New Dock Inn, Rotherhithe, for Messrs. Mann & Crossmann. Mr. Augustus Walton, architect :—

Burgen	£697	0	0
Sharing & Williams	682	0	0
Brightmore	647	0	0
Cook	613	0	0
Buller	598	0	0
Wood	590	0	0
Taylor	563	0	0
Hoben & Parker	550	0	0
Parrish & Hawker	540	0	0
Croaker	530	0	0
Aldridge & Gill	502	10	0
Cawson & Son	487	0	0
Hawkins	432	0	0

For the erection of new Sunday schools for All Saints' district, Leyton, Essex. Mr. Richard Creed, architect :—

Hunt	£2,045	0	0
Arber	1,997	0	0
Brightwell	1,893	0	0
Jones	1,890	0	0
Morter	1,858	0	0
Reed	1,764	0	0
Stewart	1,748	0	0
Bangs & Co.	1,740	0	0
North Bros.	1,725	0	0
Sayer (accepted)	1,549	0	0

For the erection of West Cliff Hall, Hythe, near Southampton, for Mr. John Wylie. Mr. W. H. Mitchell architect, Southampton :—

W. J. Martell, Hythe (accepted)	£6,162	0	0

For the erection of a temporary church, Shieldfield, Newcastle. Mr. Arthur B. Plummer, architect, Newcastle-on-Tyne :—

Walter Baston (accepted)

For the erection of nine houses in Ross-road, Beddington, Surrey. Mr. C. W. Reeves, architect, 102, Guildford-street W.C. :—

Howe & White (accepted)	£2,400	0	0

For making new road, on Isaac Duckett's Charity estate, Crayford, Kent. Mr. C. W. Reeves, surveyor :—

Manners (accepted)	£285	0	0

For rebuilding No. 4, Half Moon-street, for Mr. P. De Long. Mr. D. Cubitt Nicholls, architect :—

Langmead & Way (accepted).

For new lodge, and alterations to billiard-room, at Kenton Grange, near Harrow, for Mr. John Gwynne. Messrs. Dunk & Geden, architects :—

Various Contractors	£800	0	0

For the partial rebuilding of chemical works at Langbourne Wharf, West Ferry-road, Millwall, for Messrs. Couper, McCarnie, & Co. Messrs. Dunk & Geden, architects :—

J. Rider Hunt	£1,910	0	0

For plant-houses, potting-shed, &c., at Broomfields, Elland, for Mr. Godfrey Beaumont :—

S. Leeley (accepted)	£320	0	0

For alterations to premises, Broadway, Hammersmith, for Mr. H. Newman. Mr. R. P. Whellock, architect :—

J. Mears (accepted).

TO CORRESPONDENTS.

L. & L. (should send amounts).—D. (illustrations of the Church of the "Sacré Cœur" have appeared in our pages).—R. & A. (send view, &c.).—L. J. B. (we cannot find space for testimonials).—J. R. L. B. (already inserted).—F. B. P. (we are not disposed to enter into the inquiry as to where Hopton Wood stone has been used).—H. B. (send particulars of trial).—W. P. B. (adds no fact to the discussion).—J. P. S.—R. P. W.—H. & O.—J. C.—H de B. H.—S.—G. T. C.—J. S. M.—R. T.—H. R. G.—H. & F.—C. & F.—M. & Co.—F. & Son.—G. S. & Co.—J. W. S.—W. D.—A. & H.—G. & B.—L. & W.—B. R.—S. Bros.—R. W. D.—C. W. O.—R. J.—E. W. S.—W. S.—C. & M.—G. L.—H. H. B.—R. K.—J. F. jun.

Correspondents should address the Editor, and *not* the Publisher, except in cases of business.

All statements of facts, lists of tenders, &c. must be accompanied by the name and address of the sender, not necessarily for publication.

We are compelled to decline pointing out books and giving addresses.

Note.—The responsibility of signed articles, and papers read at public meetings, rests, of course, with the authors.

NOTICE TO ADVERTISERS.

Persons advertising in the *Builder* may have REPLIES ADDRESSED TO THE OFFICE 46, Catherine-street, Covent-garden, W.C., FREE OF CHARGE.

Letters will be forwarded if addressed envelopes are sent, together with sufficient stamps to cover the postage.

CHARGES FOR ADVERTISEMENTS.

SITUATIONS VACANT, PARTNERSHIPS, APPRENTICESHIPS, TRADE, AND GENERAL ADVERTISEMENTS.

Six lines (about fifty words) or under	4s. 6d.
Each additional line (about ten words)	0s. 6d.

Terms for Series of Trade Advertisements, also for Special Advertisements on front page, Competitions, Contracts, Sales by Auction, &c. may be obtained on application to the Publisher.

SITUATIONS WANTED.

FOUR Lines (about THIRTY words) or under	2s. 6d.
Each additional line (about ten words)	0s. 6d.

PREPAYMENT IS ABSOLUTELY NECESSARY.

⁂ Stamps *must not* be sent, but all small sums should be remitted by Cash in Registered Letter or by Money Order, payable at the Post-office, Covent-garden, W.C. to

DOUGLAS FOURDRINIER, Publisher,
Addressed to No. 46, Catherine street, W.C.

Advertisements for the current week's issue must reach the Office before THREE o'clock p.m. on THURSDAY.

The Publisher cannot be responsible for DRAWINGS, TESTIMONIALS, &c. left at the Office in reply to Advertisements, and strongly recommends that of the latter COPIES ONLY should be sent

TERMS OF SUBSCRIPTION.

"THE BUILDER" is supplied DIRECT from the Office to residents in any part of the United Kingdom at the rate of 19s. per annum, Prepaid. Remittances payable to DOUGLAS FOURDRINIER, Publisher, 46, Catherine-street, W.C.

Best Bath Stone.
WESTWOOD GROUND,
Box Ground, Combe Down,
Corsham Down,
And Farleigh Down.
RANDELL, SAUNDERS, & CO., Limited,
Corsham, Wilts. [Advt.

SEASONED
CORSHAM DOWN,
FOR
WINTER USE.
PICTOR & SONS, BOX, WILTS.
[Advt.

Doulting Freestone and Ham Hill Stone of best quality, in blocks, or prepared ready for fixing. An inspection of the Doulting Quarries is respectfully solicited; and Architects and others are CAUTIONED against inferior stone. Prices, delivered to any part of the United Kingdom, given on application to CHARLES TRASK, Norton-sub-Hamdon, Ilminster. Somerset.—Agent, Mr. E. WILLIAMS, 73, Charlotte-street, Portland-place, W. [Advt.

Doulting Freestone,
HAM HILL STONE,
BLUE LIAS LIME
(Ground or Lump),
Of best quality, supplied from their own Quarries and Kilns by Staple & Hann, Stoke, Ilminster. Agent, Mr. H. Mitchell, 5, Augustus-road, Hammersmith, London, W. [Advt.

Asphalte.
Seyssel, Patent Metallic Lava, and
White Asphaltes.
M. STODART & CO.
Office:
No. 90, Cannon-street, E.C. [Advt.

Asphalte.—The Seyssel and Metallic Lava Asphalte Company (Mr. H. Glenn), Office, 38, Poultry, E.C.—The best and cheapest materials for damp courses, railway arches, warehouse floors, flat roofs, stables, cow-sheds and milk-rooms, granaries, tun-rooms, and terraces. [Advt.

Immense quantities of
DRY WAINSCOT,
DRY MAHOGANY,
DRY WALNUT,
in all thicknesses.
B. J. HUDSON & SONS,
Whitfield-st., W., and Great Peter-st., S.W.
London. [Advt.

The Patent Vacuum Chimney Top and Ventilator, recognised by all leading Architects and Builders as best and cheapest means for curing DOWN-DRAUGHTS as well as for Ventilation of Drain and Soil Pipes.—R. Etzensberger & Co., 13, St. Andrew's-st., Shoe-lane, E.C.—[Advt.]

J. L. BACON & CO.,
MANUFACTURERS OF IMPROVED
STEAM AND HOT-WATER
APPARATUS,
FOR WARMING AND VENTILATING
Private Houses, Churches, Schools, Hospitals,
Manufactories, Greenhouses, &c.
OFFICES AND SHOW-ROOMS :—
No. 34, UPPER GLOUCESTER PLACE,
DORSET SQUARE, LONDON, N.W.
Illustrated Pamphlet on "Heating" post free.

CHAPPUIS' PATENTS FOR REFLECTING LIGHT.
DAYLIGHT REFLECTORS OF EVERY DESCRIPTION,
ALSO
ARTIFICIAL LIGHT REFLECTORS.

WHY BURN GAS?—CHAPPUIS' REFLECTORS DIFFUSE DAYLIGHT.—They are exclusively adopted by and fitted at Buckingham Palace, all H.M. Government Offices, Houses of Parliament, H.M. First Commissioner of Works, the Metropolitan Board of Works, British Museum, South Kensington Museum, Royal Institution, Guildhall Museum, on board H.M. Ships, also Railway Companies' Offices, Hospitals, Institutions, Banks, Insurance Offices, Manufactories, Private Houses and generally from Noblemen's Mansions to Artisans' Workshops. 30,000 in use in London alone. Patronised by leading Architects, Engineers, Contractors, &c., &c.

N.B.—For Prospectuses and Diagrams, address Stamped Envelope to
P. E. CHAPPUIS, Patentee and Manufacturer, 69, FLEET-STREET, LONDON.
NOTICE.—The POLYGONAL REFLECTOR (Latest Patent) FOR ARTISTIC and PICTURE GALLERIES.
ts construction allows of the angle of light being readily altered so as to reflect in any desirable direction.